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# Research on Modifications to the Method of Preliminary Estimates of Interprovincial Migration

by Jiaosheng He and Margaret Michalowski

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## 1. Introduction

Migration is an important issue for several reasons. First, it affects the size and composition of the population of the areas of origin and of destination; thus, it comprises a fundamental element of the demographic, social, and cultural structure of a nation and its regions. Second, a large portion of migration is labour force flow that represents the transfer of different skills. As a result, it has significant repercussions for the economic performance of both sending and receiving areas. Finally, migration is a major factor in determining government programs, such as revenue transfers and cost-sharing programs among various levels of government. In response to the importance of internal migration issues, the Population Estimates Program at Statistics Canada has been producing migration estimates using administrative sources of data. As such, there are two versions of migration estimates currently available at Statistics Canada: preliminary (*P*) and final (*F*).

The *P* and *F* estimates are based on the monthly Child Tax Benefit (CTB) file and the annual income tax return file, respectively; these two files are provided by Canada Customs and Revenue Agency (CCRA). The CTB is an income supplement provided by the federal government to those families with children of less than 18 years of age, and under a certain income threshold. The main advantage of the CTB and the income tax return data is the reasonably good quality of coverage and accuracy. They are also a timely source of data: the CTB files are after the reference date by about four months while the income tax return file lags the CTB files by about 12 months. Hence, these data sources represent a timely and continuous data base for population estimates.

The *P* estimates of internal migration are produced by Demography Division. The CTB file is adjusted to account for the coverage of children aged 0 to 17 years, and the differential propensity to migrate between families receiving and not receiving this benefit (Statistics Canada, 2003). The monthly CTB-based migration estimates, of reasonably good quality, have been available since the month of July 1993. Prior to this date, family allowance files were used for the purpose of estimates (Bédard, 1994; Bédard and Michalowski, 1994). The coverage rate of the CTB file, defined as the ratio of the number of children actually receiving CTB to the total number of children under 17 years of age, varies more by province and territory than it does over a time period. Table 1 presents the coverage rates of the CTB file for the provinces and territories in 1998/99. They vary from a low of 69.2% in the Yukon Territory to a high of 86.2% in Prince Edward Island, with an average and standard deviation of 78.4% and 6.3%, respectively.

The *F* estimates are produced by Small Area and Administrative Data Division (SAADD). The annual data of income tax returns are used to develop these estimates. They are subsequently disaggregated into monthly estimates in accordance with monthly schedules of the *P* estimates. Development of the *F*

estimates of migration involves four main steps (SAADD, 2002): (1) Geocoding of income tax records; (2) estimating non-filing dependents of tax filers, by age group and sex; (3) identifying the number, age and gender of migrant tax filers; and (4) adjusting for the population not covered by the CCRA taxation system. Coverage of tax filers, defined as the ratio of SAADD's population "at-risk-to-migrate" to the total number of population estimated by Demography Division, also varies among provinces and territories, and over time. Table 1 includes the coverage rates of tax filers for 1998/99. It shows the rate changes from 81.9% in the Yukon Territory to 92.7% in Prince Edward Island, with an average and standard deviation of 88.0% and 3.6%, respectively. When compared to the CTB coverage rates, the rate of tax filers is higher and its variance is smaller.

**Table 1. Coverage rates (%) of CTB file (population 0 to 17 years and income tax file (total population), Canada, provinces and territories, 1998/99**

| Province/territory<br>(1) | CTB file<br>(2) | Income tax file<br>(3) |
|---------------------------|-----------------|------------------------|
| Canada                    | 75.3            | 86.9                   |
| N.L.                      | 84.8            | 92.1                   |
| P.E.I.                    | 86.2            | 92.7                   |
| N.S.                      | 82.1            | 88.1                   |
| N.B.                      | 84.3            | 91.9                   |
| Que.                      | 80.0            | 88.8                   |
| Ont.                      | 70.3            | 85.6                   |
| Man.                      | 82.4            | 89.9                   |
| Sask.                     | 83.0            | 90.7                   |
| Alta.                     | 73.9            | 86.3                   |
| B.C.                      | 73.6            | 83.3                   |
| Y.T.                      | 69.2            | 81.9                   |
| N.W.T.                    | 70.7            | 84.9                   |

**Note:** The coverage rates of income tax file indicate the "at-risk-to-migrate" population defined as those who filed tax returns for two consecutive years and their dependents.

**Source:** Statistics Canada 2003.

The *P* estimates of migration differ from the *F* estimates of migration in that a different time frame is used to define a move. A person can have more than one interprovincial move according to the CTB-based data, whereas for the same person, in an extreme case, no move is recorded based on the annual income tax data. Consequently, the two estimates have shown considerable discrepancies, (although other causes may also contribute to this disagreement). In general, the number of migrants from *P* estimates exceeds those from *F* estimates (Statistics Canada, 2003). For the period from 1993/94 to 2000/01, the proportion of *F* estimates is about 76% to 86% of the *P* estimates. A long-standing issue

facing the Population Estimates Program is how to reduce the discrepancies between the *P* and the *F* estimates of migration (Wilkinson, memo, 2000).

The objectives of the present report are twofold. The first is to describe the discrepancies between *F* and *P* estimates. The second objective is to introduce and describe six approaches to decrease the discrepancies using the regression method, simple time series analysis, and the U.S. Bureau of Census method. The organisation of the report is as follows: Section 2 provides an overview of the discrepancies between the two versions of interprovincial migration estimates based mainly on the index of dissimilarity. Section 3 describes the approaches that are used to obtain the modified preliminary migration estimates. Section 4 describes further estimates based on one of the methods (Method 3) specified in Section 3. Conclusions are presented in section 5.

## 2. Discrepancies between the two estimates of migration

Before dealing with the issue of reducing the discrepancy between the two estimates, it is worthwhile to identify how these two estimates of interprovincial migration differ. We first look at the discrepancies between the two estimates for out- and for in-migration. The discrepancy is measured as a percentage difference (*PD*) and is defined as

$$PD = \frac{\text{Preliminar } y - \text{Final}}{\text{Final}} \times 100$$

Thus, a positive *PD* indicates that the *P* estimate is greater than the *F* estimate, and a negative value reflects the opposite. Table 2 presents the summary statistics (average and standard deviation) of this measure for the provinces and territories using the data between 1993/94 and 2000/01 (96 cases). It shows that the eight-year average of *PD*s for out-migration ranges from a high of 26.0% in Newfoundland and Labrador to a low of 14.8% in the Northwest Territories. This suggests that *P* estimates of out-migration are about 15% to 26% higher than *F* estimates in the provinces and territories. Based on the standard deviations (column 2), the variation of *PD*s is more pronounced for small provinces and territories than for large provinces. For in-migration the average of *PD*s varies between 47.8% in Newfoundland and Labrador and 17.3% in Alberta. Overall, with the exception of Ontario, Alberta and British Columbia, the average of *PD*s for in-migration is higher than that for out-migration in the rest provinces and territories. This implies that more discrepancies are observed between the two versions of estimates for in-migration than for out-migration.

There is no clear pattern with respect to *PDs* of net migration. A positive *PD* is observed for about 51% of the 96 cases in the period 1993/94 to 2000/01. This suggests that, for about half of the cases, *P* estimates of net migration are greater than *F* estimates; the other half show the opposite. The average of *PDs* for net migration in this eight-year period ranges from a low of -66.5% in Ontario to a high of 115.6% in Prince Edward Island, with a much larger standard deviation, in comparison to that for out- and in- migration. This indicates that the distribution of net migration among the provinces and territories tends to be dispersed more from the average than that of out- and in- migration. One of the implications, therefore, arising from this table is that modelling net migration will be more challenging than modelling out- and in- migration.

**Table 2. Average and standard deviation (sd) for the relative percentage difference (%) between preliminary and final annual estimates of out-, in- and net migration, 1993/94 to 2000/01**

| Province/territory | Out-migration |      | In-migration |      | Net migration |       |
|--------------------|---------------|------|--------------|------|---------------|-------|
|                    | average       | sd   | average      | sd   | average       | sd    |
| N.L.               | 26.0          | 9.3  | 47.8         | 11.7 | - 1.9         | 21.5  |
| P.E.I.             | 16.5          | 10.8 | 19.6         | 9.8  | 115.6         | 306.9 |
| N.S.               | 16.1          | 6.6  | 20.1         | 7.7  | - 56.8        | 131.0 |
| N.B.               | 22.4          | 9.4  | 29.5         | 8.0  | - 48.3        | 69.4  |
| Que.               | 23.3          | 7.6  | 25.0         | 6.5  | 24.5          | 24.8  |
| Ont.               | 24.3          | 5.2  | 21.1         | 9.3  | - 66.5        | 152.2 |
| Man.               | 21.3          | 8.0  | 34.8         | 8.4  | - 29.9        | 21.9  |
| Sask.              | 25.6          | 6.7  | 37.2         | 11.3 | - 13.1        | 46.6  |
| Alta.              | 24.1          | 4.9  | 17.3         | 7.8  | 100.3         | 227.1 |
| B.C.               | 22.6          | 10.9 | 21.9         | 5.5  | 7.7           | 42.5  |
| Y.T.               | 23.1          | 12.1 | 24.1         | 6.3  | 25.4          | 64.9  |
| N.W.T.             | 14.8          | 17.7 | 21.5         | 8.6  | 114.5         | 352.2 |

Source: Statistics Canada, Demography Division.

To look at how a specific migration flow, with origin and destination, differs between the two estimates, we use the index of dissimilarity (*ID*) to examine the overall discrepancy in distribution between the preliminary and the final migration flow matrices in the same year, and, between two consecutive annual migration matrices of the *F* estimates. Specifically, two steps are taken in the calculation of this index.

1. Calculate the percentage distribution of migration in migration matrices *a* and *b*, respectively. Matrices *a* and *b* are the preliminary and the final migration matrix, respectively, or the matrix in year *t* and in year (*t*-1) for the final migration series. This calculation is performed by dividing

the number of migrants of each cell by the total number of migrants of the matrix and then multiplying by 100.

2. Calculate the index. It is based on the absolute differences between the *percentages* for each cell of the migration matrices *a* and *b*. The *ID* between the two migration matrices is then one-half of the sum of the absolute differences between the respective cells of the matrices (Shryock and Swanson, 2004). The formula may be written as follows:

$$ID = \frac{1}{2} \sum_{i,j} |m_{ij}^a - m_{ij}^b| \quad (1)$$

where  $m_{ij}^a$  and  $m_{ij}^b$  represent the percentage of migrants of a cell for interprovincial migration matrices *a* and *b*, respectively. For example, if the *ID* is equal to 10%, it means that 10% of the migrants in matrix *a* will have to be transferred to different cells (here province or territory) in order to make their distribution the same as that of migration matrix *b* (Duncan and Duncan, 1955).

Table 3 shows the index between the preliminary and the final origin-destination migration flow matrix (column 2), and between two consecutive final migration matrices (column 3). For the preliminary vs. final migration flows, the index ranges from 3.4% to 6.1%, with an average of 4.2%. With the exception of the 6.1% in 1999/2000, it varies from 3.5% to 4.7%. This suggests that, although there are relatively large discrepancies between the two versions of out- or in-migration, as discussed above, the discrepancies in distribution as a percentage between the two estimates is relatively small.

**Table 3. Index of dissimilarity (*ID*) between final and preliminary migration matrices, and between two consecutive final migration matrices, 1993/94 to 2000/01**

| Year<br>(1) | <i>ID</i> between <i>F</i> and <i>P</i><br>(2) | <i>ID</i> between <i>F</i> s (1-year lag)<br>(3) |
|-------------|------------------------------------------------|--------------------------------------------------|
| 1993/94     | 4.0                                            | 2.7                                              |
| 1994/95     | 4.1                                            | 3.4                                              |
| 1995/96     | 3.5                                            | 3.5                                              |
| 1996/97     | 4.0                                            | 5.6                                              |
| 1997/98     | 3.4                                            | 5.9                                              |
| 1998/99     | 4.7                                            | 5.1                                              |
| 1999/00     | 6.1                                            | 3.3                                              |
| 2000/01     | 3.9                                            | 2.9                                              |
| average     | 4.2                                            | 4.1                                              |
| sd          | 0.9                                            | 1.3                                              |

Source: Statistics Canada, Demography Division.

Column 3 of Table 3 shows the index calculated using two consecutive annual migration matrices of  $F$  estimates. For example, the 1993/94 index of 2.7% is calculated using the 1993/94 and the 1992/93 final migration matrices. The index ranges from 2.7% to 5.9%, with an average of 4.1%. Again, the indices for the eight-year period demonstrate that the origin-destination migration flows are relatively stable, and the distribution as a percentage is close. Over time, this relative stability of final origin-destination flows suggests that a previous year matrix of  $F$  estimates could be used for derivation of a modified migration matrix.

### 3. Six methods of deriving modified migration

Our purpose is, not only to reduce discrepancies between  $P$  and  $F$  estimates of out- and in-migration, but also to reduce discrepancies between the two estimates of net migration. Six methods have been tested for this purpose.

#### 3.1 Deriving modified out-migration and its flow matrix

The first method involves two steps to derive of preliminary modified ( $PM$ ) estimates of out-migration. In the first step, a simple regression between  $F$  and  $P$  estimates of province and territory outflows is used to derive  $PM$  estimates of out-migration. In the second step,  $PM$  estimates of out-migration by province and territory are converted into an origin-destination flow matrix by using an out-migration (origin) constrained modeling method (see Appendix A for details).

**Table 4. Average and standard (sd) of absolute percentage difference (%) for preliminary modified ( $PM$ ) estimates and for preliminary ( $P$ ) estimates, out-migration, 1994/95 to 2000/01**

| Year    | $ PM-F /F \times 100$ |      | $ P-F /F \times 100$ |      |
|---------|-----------------------|------|----------------------|------|
|         | average               | sd   | average              | sd   |
| (1)     | (2)                   | (3)  | (4)                  | (5)  |
| 1994/95 | 9.48                  | 5.06 | 31.12                | 6.06 |
| 1995/96 | 2.54                  | 2.18 | 22.91                | 3.62 |
| 1996/97 | 6.96                  | 4.44 | 20.62                | 8.32 |
| 1997/98 | 5.81                  | 4.72 | 16.67                | 6.84 |
| 1998/99 | 5.79                  | 6.30 | 20.33                | 9.20 |
| 1999/00 | 7.76                  | 5.54 | 16.10                | 7.15 |
| 2000/01 | 5.59                  | 5.26 | 22.30                | 7.80 |

Source: Statistics Canada, Demography Division.

The simple regression method has the following procedure: annual  $F$  estimates of out-migration are regressed on annual  $P$  estimates of out-migration using three-year pooling data; also, the regression is forced to have a zero constant.  $PM$  estimates are calculated assuming a one-year lag in data availability (the usual SAADD production schedule). Suppose we would like to derive  $PM$  estimates of out-migration for 1995/96. We use the previous three-year data (1994/95, 1993/94 and 1992/93) to obtain the annual regression parameter. The annual regression parameter is then used to obtain  $PM$  estimates of out-migration for 1995/96. Table 4 shows that the summary statistics for  $PM$  out-migration estimates are far better than  $P$  estimates of out-migration.

In the second step, we use a one-year previous interprovincial migration matrix of  $F$  estimates to redistribute annual  $PM$  out-migration. The redistribution results in a modified origin-destination migration flow matrix. This migration matrix is evaluated against the matrix of the  $F$  estimates using the percentage of migrants misallocated ( $PMIS$ ).  $PMIS$  is a goodness-of-fit statistic, indicating the percentage of migrants who would have to be "displaced" to other provinces and territories in order for the modified origin-destination matrix to match the flow matrix of  $F$  estimates.  $PMIS$  shows that the modified migration matrices are much closer to the matrix of  $F$  estimates than to the migration matrix of the  $P$  estimates (see Table 5).

**Table 5. Percentage of migrants misallocated ( $PMIS$ ) between migration matrices, using origin-constrained model, 1994/95 to 2000/01**

| Year    | $PMIS$                |                      |
|---------|-----------------------|----------------------|
|         | Matrices $PM$ and $F$ | Matrices $P$ and $F$ |
| (1)     | (2)                   | (3)                  |
| 1994/95 | 5.0                   | 15.1                 |
| 1995/96 | 3.1                   | 12.3                 |
| 1996/97 | 5.2                   | 10.7                 |
| 1997/98 | 5.8                   | 8.6                  |
| 1998/99 | 5.1                   | 10.7                 |
| 1999/00 | 3.8                   | 10.7                 |
| 2000/01 | 3.1                   | 11.1                 |
| average | 4.4                   | 11.3                 |
| sd      | 1.1                   | 2.0                  |

Source: Statistics Canada, Demography Division.

Results are further analysed by looking at the numbers for net migration. Table 7 shows that when  $PM$  and  $P$  estimates are compared to  $F$ , in 66% of the cases,  $PM$  compares better than or close to the  $P$  estimates (a case here means net migration for a particular province or territory in a particular year: the

total number of cases is 84, i.e.,  $12 \times 7$ ). However, the actual improvement is achieved in only 51% of cases.

### 3.2 Deriving modified in- and out-migration separately

In the second method, the regression method is used to derive preliminary modified in-migration (*PMI*) and preliminary modified out-migration (*PMO*) separately. Their difference serves as an estimate of preliminary modified net migration (*PMN*). Specifically, *PMI* and *PMO* are derived based on the annual regression parameter, which is estimated using three-year pooling and the zero-constant-regression procedure. To derive *PMI*, the *F* estimates of in-migration are regressed on the *P* estimates of in-migration; to derive *PMO*, the *F* estimates of out-migration are regressed on the *P* estimates of out-migration.

**Table 6. Average and standard deviation (sd) of absolute percentage difference (%) for preliminary modified (*PM*) estimates and for preliminary (*P*) estimates, *in-migration*, 1994/95 to 2000/01**

| Year    | PM-F /F $\times 100$ |       | P-F /F $\times 100$ |       |
|---------|----------------------|-------|---------------------|-------|
|         | average              | sd    | average             | sd    |
| (1)     | (2)                  | (3)   | (4)                 | (5)   |
| 1994/95 | 12.53                | 10.26 | 34.02               | 13.22 |
| 1995/96 | 5.09                 | 6.12  | 28.02               | 9.68  |
| 1996/97 | 6.41                 | 5.98  | 26.27               | 11.37 |
| 1997/98 | 7.88                 | 3.96  | 17.22               | 9.04  |
| 1998/99 | 6.47                 | 7.13  | 23.57               | 10.82 |
| 1999/00 | 9.34                 | 6.59  | 25.53               | 11.43 |
| 2000/01 | 8.35                 | 7.55  | 25.57               | 10.68 |

Source: Statistics Canada, Demography Division.

For each year being estimated, total *PMI* and total *PMO*, across all provinces and territories, are not necessarily identical. In such situations, totals are constrained to be the same numbers by allocating one-half of the difference to *PMI* and the other half to *PMO*. These differences are then allocated to individual provinces and territories on a proportional basis. Similar to the degree of improvement in *PMO*, *PMI* is far better than *P* estimates of in-migration (see Table 6). The results of *PMN* using this method are evaluated against the net migration of *F* and *P* estimates. As indicated in Table 7, this method of estimating the modified net migration results in 46% of cases being better than the *P* estimates of net migration, but 54% of cases being worse than the *P* estimates of net migration.

**Table 7. Classification of provinces and territories based on results of the six methods for modified net migration, 1994/95 to 2000/01**

| Year    | Redistribution of<br>PMO<br>Method 1 |                |                | Regression of<br>"in" and "out"<br>Method 2 |                |                | Regression of<br>"net"<br>Method 3 |                |                | EWMA<br>Method 4 |                |                | U S Census<br>Bureau method<br>Method 5 |                |                | Regression of<br>"first difference"<br>Method 6 |                |                |
|---------|--------------------------------------|----------------|----------------|---------------------------------------------|----------------|----------------|------------------------------------|----------------|----------------|------------------|----------------|----------------|-----------------------------------------|----------------|----------------|-------------------------------------------------|----------------|----------------|
|         | B <sup>1</sup>                       | C <sup>2</sup> | W <sup>3</sup> | B <sup>1</sup>                              | C <sup>2</sup> | W <sup>3</sup> | B <sup>1</sup>                     | C <sup>2</sup> | W <sup>3</sup> | B <sup>1</sup>   | C <sup>2</sup> | W <sup>3</sup> | B <sup>1</sup>                          | C <sup>2</sup> | W <sup>3</sup> | B <sup>1</sup>                                  | C <sup>2</sup> | W <sup>3</sup> |
| 1994/95 | 5                                    | 2              | 5              | 8                                           | 1              | 3              | 8                                  | 4              | 0              | 4                | 2              | 6              | 4                                       | 1              | 7              | 4                                               | 3              | 5              |
| 1995/96 | 6                                    | 2              | 4              | 3                                           | 3              | 6              | 5                                  | 7              | 0              | 3                | 0              | 9              | 3                                       | 1              | 8              | 3                                               | 2              | 7              |
| 1996/97 | 5                                    | 0              | 7              | 5                                           | 1              | 6              | 6                                  | 4              | 2              | 3                | 2              | 7              | 6                                       | 6              | 0              | 7                                               | 1              | 4              |
| 1997/98 | 3                                    | 4              | 5              | 5                                           | 2              | 5              | 6                                  | 6              | 0              | 2                | 3              | 7              | 5                                       | 7              | 0              | 5                                               | 1              | 6              |
| 1998/99 | 6                                    | 2              | 4              | 6                                           | 2              | 4              | 6                                  | 6              | 0              | 3                | 0              | 9              | 2                                       | 3              | 7              | 4                                               | 2              | 6              |
| 1999/00 | 10                                   | 1              | 1              | 6                                           | 4              | 2              | 5                                  | 7              | 0              | 9                | 1              | 2              | 9                                       | 1              | 2              | 8                                               | 2              | 2              |
| 2000/01 | 8                                    | 2              | 2              | 6                                           | 3              | 3              | 6                                  | 6              | 0              | 7                | 2              | 3              | 7                                       | 2              | 3              | 7                                               | 0              | 5              |
| total   | 43                                   | 13             | 28             | 39                                          | 16             | 29             | 42                                 | 40             | 2              | 31               | 10             | 43             | 36                                      | 21             | 27             | 38                                              | 11             | 35             |
| %       | 51                                   | 15             | 33             | 46                                          | 19             | 35             | 50                                 | 48             | 2              | 37               | 12             | 51             | 43                                      | 25             | 32             | 45                                              | 13             | 42             |

**Notes:**

1. B – better,  $PMN$  migration is better than  $P$  estimates of net migration when  $|F_n - PM_n| / |F_n|$  is less than  $|F_n - P_n| / |F_n|$ ,  $F_n$ ,  $P_n$ , and  $PM_n$  are final, preliminary and preliminary modified net migration, respectively.
2. C – close, difference between the two terms,  $|F_n - P_n| / |F_n|$  and  $|F_n - PM_n| / |F_n|$  is not greater than 0.10.
3. W – worse, the difference between the two terms,  $|F_n - P_n| / |F_n|$  and  $|F_n - PM_n| / |F_n|$  is greater than 0.10.

Source: Statistics Canada, Demography Division.

### 3.3 Deriving modified net migration directly from regression

In this method, modified net migration is obtained directly from regressing the final net migration on preliminary net migration. As in Method 1 and Method 2, the regression is based on the 3-year pooling data approach. Due to the nature of the data on the number of net migration, the constant parameter of the regression equation always equals to zero.

In Table 7, when compared to  $F$  estimates (with the exception of two cases),  $PMN$  migration is either better than or close to the preliminary series of net migration. Specifically, in 50% of the cases,  $PMN$  migration is better than the  $P$  estimates of net migration; in 48% of the cases,  $PMN$  migration is close to the  $P$  estimates of net migration. Further analysis shows that in most cases the difference (cases of the category "close") between the two terms,  $\frac{|F_n - P_n|}{|F_n|}$  and  $\frac{|F_n - PM_n|}{|F_n|}$  lies in a narrow range between 0.01 and 0.08. Therefore, discrepancies arising from this method, compared with those from the previous two methods are much smaller. Overall, judging from the  $PMN$  estimates, this method is better than Method 1 and Method 2.

### 3.4 Estimating net migration using the exponentially weighted moving average model

Another class of models, which is based on time series data and is often used for estimation, is called the moving average model. One such model is the exponentially weighted moving average (EWMA) model (see Appendix B for details). In using the EWMA approach, we assume that a reasonably good estimation of net migration relies more on the most recent values than on earlier ones. We use only  $F$  estimates of net migration to obtain  $PMN$  migration series. The value of the weighting parameter " $\alpha$ " is given 0.7.

Table 7 indicates that, relative to  $F$  estimates, only 37% of the cases are better than  $P$  estimates of net migration. The performance of the method varies among the provinces and territories and over the seven-year period. The best results are found in the year 1999/2000 in which there are eight provinces and territories showing better  $PMN$  estimates than the preliminary net migration. In contrast, the year 1998/99 shows the worst performance (ten provinces have worse  $PMN$  estimates relative to  $P$  data of net migration). We also tested the use of other values of " $\alpha$ ", but the results are unsatisfactory.

For each year under estimation, the total number of the modified net migration across all provinces and two territories is not necessarily zero. In such circumstances, totals are constrained to zero by allocating the discrepancies to individual provinces and territories on a proportional basis.

Two features of this method prevent us from improving the estimates. First, obtaining the values of " $\alpha$ " is a trial-and-error process and, therefore, in general, the EWMA approach is a heuristic procedure. Second, the approach relies completely on past values, and often is unable to predict net migration with reasonable accuracy when the data series comes to a turning point. In other words, only when the time series data on net migration demonstrates a reasonable stability can this approach be appropriate in estimating net migration.

### 3.5 Estimating net migration using the U.S. Bureau of Census approach

For population under the age of 65 years, the U.S. Census Bureau estimates internal migration through the address matching of federal tax returns for successive years. For those aged 65 years and over, the Bureau uses county-level information on the number of medicare enrollees from the Health Care Financing Administration (U.S. Census Bureau, 2000). Based on the U.S. Census Bureau approach, a similar method can be established for Canada's estimates of internal migration.

**(1) Calculate the net migration rate.** For a particular geographical area, using the number of in-migrants and out-migrants, as well as the number of "at-risk-to-migrate" persons provided by SAADD, the net migration rates for provinces and territories were calculated.

**(2) Derive the net number of migrants.** The net migration rates for provinces and territories are then applied to the preliminary population estimates (available from Demography Division) at the beginning of the migration period.

As in Method 4, the total number of modified net migration for each year under estimation across all provinces and two territories is not necessarily zero. In such circumstances, totals are constrained to zero by allocating the discrepancies to individual provinces and territories on a proportional basis.

Table 7 indicates that, overall, 43% of the cases (the modified net migration) are better than the *P* estimates of net migration. The performance of this approach varies over the seven-year period. It depends on the consistency of the previous year's net migration rates (derived from income tax files) to the migration patterns of the reference year.

### 3.6 Estimating net migration using the first difference regression

This proposed method is based on regressing the first difference of final net migration against that of preliminary net migration. In other words, the difference of final net migration between two consecutive years, year *t* and year *t-1*, is regressed against the difference of preliminary net migration between year *t* and year *t-1*. This is the first difference regression method. The modified final net migration is obtained using the regression parameter (for details, see Appendix C).

The results indicate that when the regression is based on the 24 observations, the modified net migration in 45% of the 84 cases is better than the *P* estimates, and the rest is either close (13%) or much worse (42%). On the other hand, when the regression is based on removing the outliers, slightly better results are shown. Specifically, 48% of cases are better than the *P* net migration, 14% are close, and 38% are worse (or 52% are worse than the *P* estimates of net migration). Overall, the modified estimates of net migration using this method are not satisfactory since its performance is not as good as that of Method 3

## 4. Further estimates based on Method 3

### 4.1 Extension of Method 3

In Method 3, *PMN* is obtained using the regression method. In this section we would like to demonstrate that we can have the estimates of *PMI* and the origin-destination migration matrix. We obtained *PMO* in the first method by regressing the final out-migration against the preliminary out-migration. Based on *PMN* and *PMO* estimates, we obtained *PMI* by summing *PMN* and *PMO*. The summary statistics are included in Table 8 - when comparing *PMI* with *F* estimates of in-migration. Comparing the summary statistics of *PMI* by this extension (Table 8) with that using the regression method (Table 6), except for 1997/98, the average absolute difference for *PMI* migration using this approach, is smaller than those using the regression method; while the summary statistics are approximately similar for the year 1999/2000. Therefore, we have derived the best possible modified estimates for net-, out-, and in-migration through Method 3 and its extension.

**Table 8. Average and standard deviation (sd) of absolute percentage difference (%) for preliminary modified (*PM*) estimates and for preliminary (*P*) estimates, in-migration, 1994/95 to 2000/01**

| year    | PM-F /F x 100 |      | P-F /F x 100 |       |
|---------|---------------|------|--------------|-------|
|         | average       | sd   | average      | sd    |
| (1)     | (2)           | (3)  | (4)          | (5)   |
| 1994/95 | 11.90         | 7.15 | 34.02        | 13.22 |
| 1995/96 | 4.53          | 3.95 | 28.02        | 9.68  |
| 1996/97 | 3.99          | 3.66 | 26.27        | 11.37 |
| 1997/98 | 8.64          | 5.15 | 17.22        | 9.04  |
| 1998/99 | 6.46          | 5.88 | 23.57        | 10.82 |
| 1999/00 | 10.99         | 6.62 | 25.53        | 11.43 |
| 2000/01 | 7.31          | 5.83 | 25.57        | 10.68 |

**Note:** *PM* in-migration is the sum of *PMO* and *PMN*.

**Source:** Statistics Canada, Demography Division.

Using an origin-destination (also called doubly) constrained model, we redistribute *PMO* and *PMI* derived from this further estimate to obtain the origin-destination migration flow matrix. These *PM* matrices are evaluated against the *F* migration matrix. Table 9 shows the evaluation results based on the percentage of migration misallocated. It indicates that, for seven years, *PMIS* between the *PM* and the *F* migration matrices is considerably lower than that between the *P* and the *F* migration matrices. The *PMIS* between *PM* and *F* migration matrices in Table 9 ranges from a low of 2.8% to a high of 5.6%, with an average of 4.2%; whereas, *PMIS* between the *P* and *F* matrices varies between 8.6% and 15.1%,

with an average of 11.3%. It, therefore, suggests that the *PM* migration matrix based on the origin-destination constrained model is much closer to the final matrix than the preliminary is to the final matrix. Compared to *PMIS* in Table 5, the summary statistics of *PMIS* using the origin-destination constrained model are slightly better.

**Table 9. Percentage of migrants misallocated (*PMIS*) between migration matrices, using the origin-destination constrained model, 1994/95 to 2000/01**

| Year    | PMIS                            |                                |
|---------|---------------------------------|--------------------------------|
|         | Matrices <i>PM</i> and <i>F</i> | Matrices <i>P</i> and <i>F</i> |
| (1)     | (2)                             | (3)                            |
| 1994/95 | 5.6                             | 15.1                           |
| 1995/96 | 2.8                             | 12.3                           |
| 1996/97 | 4.2                             | 10.7                           |
| 1997/98 | 4.2                             | 8.6                            |
| 1998/99 | 3.9                             | 10.7                           |
| 1999/00 | 5.0                             | 10.7                           |
| 2000/01 | 3.9                             | 11.1                           |
| average | 4.2                             | 11.3                           |
| sd      | 0.9                             | 2.0                            |

**Note:** The *PM* migration matrix is estimated using 1-year previous final migration matrix to redistribute annual *PM* out- and *PM* in-migration.

**Source:** Statistics Canada, Demography Division.

#### 4.2 Replacing the final estimate of net migration with the new method final net migration

Method 3 also was tested by using the new method *F* estimates of net migration data. These data are based on the calculation of the current method "inflation factor"; however, the extreme inflation factors are modified with the national average, rather than the individual provincial averages (see Wilkinson, 2003).<sup>1</sup>

Evaluation indicates that 48% of cases are better than the *P* estimates of net migration, and 52% of cases are close to the *P*. This result is quite close to that of using the *F* estimates of net migration with Method 3.

Similar results are obtained when Method 1 and Method 2 are tested using the new method estimates of migration as a reference source (He and Michalowski, 2003a).

1. This method was adopted by SAADD for the production of estimates of internal migration starting with the 2001/02 period.

## 5. Conclusions

The application of the simple regression method to derive *PMO* (Method 1) resulted in data much converged to the final series of estimates of out-migration rather than to the ones based on the CTB-data. When these estimates were converted into an origin-destination migration matrix, flows were not in our range of expectation. In other words, the regression-based *PMO* and its subsequent redistribution provide us with reasonably good estimates of out-migration, but unsatisfactory net migration estimates. As our ultimate goal is to obtain better convergence of the preliminary and the final net migration data, we have tested five other feasible approaches to directly estimate net migration (*PMN*). The underlying idea is, that once we have good estimates of net migration, the migration flow matrix can be modelled.

In Method 2, modified net migration is the result of the difference between *PMI* and *PMO*. In Method 3, modified net migration is obtained directly by regressing final net migration on preliminary net migration. In Method 4, modified net migration is obtained using the EWMA model based on *F* estimates of net migration data. In Method 5, net migration rates are derived from one-year lagged income tax return data and applied to *P* estimates of population. In the last method, Method 6, modified net migration is derived by regressing the first difference of net final data against the first difference of net preliminary data.

We have concluded that the best results for *PMN* migration are obtained from the direct regression of *F* estimates of net migration on *P* estimates of net migration. The worst results are from the EWMA approach. All other methods produce results between these two extremes.

A common methodological feature for the first three methods is the use of the simple regression model based on preliminary and final migration data. These three methods perform better relative to the other three methods. One of the reasons may be the simultaneous reliance on final and preliminary data, whether it is only out-migration data, out-migration and in-migration data, or the balance of the two in the form of net migration data.

Method 3 works best among the three regression methods. Not only do 50% of the cases show better *PMN* migration estimates; as well, 47% of the cases have *PMN* close to preliminary net migration. These 47%, although being worse, display a small margin of deterioration when compared to the other methods. Method 2, deriving *PMI* and *PMO* separately, does not work well. In using Method 2, we noticed that the degree of the discrepancies between preliminary and final series of data for in-migration and for out-migration is different. Using the regression model to derive modified in-migration and modified out-migration separately, and then combining the two to obtain the modified net migration,

does not work for most of the cases - better modified in-migration and out-migration cannot guarantee better modified net migration. Method 1 delivers modified net migration estimates which are more consistent with  $F$  estimates than those obtained through Method 2 but still with a lower degree of consistency than the results of Method 3.

The relatively worst results, obtained when applying Method 4, suggest that relying exclusively on final data time series is not appropriate for deriving modified net migration. It seems that the time series of the final migration data might not be the best predictor of the migration pattern for the reference period. This is especially true when the migration pattern undergoes abrupt change.

The performance of Method 5 indicates that the migration patterns arising from only the taxfilers and their dependents ("unadjusted" income tax data) do not fully reflect the patterns of total population in the reference period. This conclusion is relative to the performance of the other five methods. Moreover, with the exception of Ontario and Quebec, net migration rates for most provinces and territories are too fluctuating to be appropriate for deriving modified net migration estimates. The performance of Method 6 cannot match that of Method 3 because the percentage of cases belonging to the "worse" category is much higher.

Based on the above evidence from the 1994/95 to 2000/01 period, it seems that the methods in which final and preliminary migration data are combined to estimate the preliminary net migration (Method 3) are the best approach to achieve improved convergence between the  $P$  and the  $F$  estimates of internal migration for the Population Estimation Program. This approach allows for the "smoothing" of some erratic patterns displayed by CTB-based estimates while preserving this source's ability to capture current shifts in migration patterns.

Finally, the estimates of internal migration discussed here may be compared with data from census and census coverage studies (Reverse Record Check). Table 10 presents net interprovincial/territorial migration from these sources from the 1996 to 2001 period. Notwithstanding annual discrepancies between tax-returns-based and CTB-based estimates of migration, it seems that their 5-year period data are very comparable to each other and to the census and Reverse Record Check numbers.

**Table 10. The net interprovincial migration based on different sources by province and territory, 1996 to 2001**

| Province/territory | Tax        |            | CTB based | 2001 Census | 2001 RRC | Method 3 |
|--------------------|------------|------------|-----------|-------------|----------|----------|
|                    | old method | new method |           |             |          |          |
| (1)                | (2)        | (3)        | (4)       | (5)         | (6)      | (7)      |
| N.L.               | -32,075    | -37,577    | -32,395   | -31,035     | -38,157  | -29,350  |
| P.E.I.             | 182        | -504       | 309       | 140         | -4,439   | 290      |
| N.S.               | -6,363     | -5,832     | -5,083    | -1,290      | 5,037    | -4,593   |
| N.B.               | -8,412     | -11,593    | -5,455    | -8,430      | -17,268  | -4,916   |
| Que.               | -69,047    | -69,128    | -77,886   | -57,310     | -48,685  | -70,908  |
| Ont.               | 68,906     | 70,939     | 56,499    | 51,885      | 62,559   | 52,381   |
| Man.               | -21,041    | -23,892    | -14,880   | -18,585     | -25,418  | -13,488  |
| Sask.              | -25,424    | -28,553    | -24,264   | -24,925     | -32,017  | -22,304  |
| Alta.              | 137,693    | 139,858    | 140,106   | 119,425     | 134,935  | 127,934  |
| B.C.               | -37,529    | -27,656    | -30,888   | -23,620     | -36,547  | -29,507  |
| Y.T.               | -3,088     | -2,770     | -3,821    | -2,755      | ..       | -3,525   |
| N.W.T.             | -3,378     | -3,020     | ..        | -3,170      | ..       | -2,016   |
| Nvt. <sup>1</sup>  | -424       | -272       | ..        | -330        | ..       | ..       |
| average            | 31,812     | 32,430     | 35,599    | 26,377      | 40,506   | 30,101   |
| sd                 | 51,747     | 52,536     | 56,366    | 43,605      | 57,055   | 49,186   |

**Notes:**

The average is calculated using the absolute values of the net migration.

.. not available for specific reference period

1. For the CTB-based and Method 3, estimates for Nunavut are included with the Northwest Territories.

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### Appendix A. Deriving modified out- and in-migration and migration flow matrix

Let  $F_i$  and  $P_i$  represent the respective annual final and preliminary out-migration originated in province or territory  $i$  (note also  $\sum F_i = F$ , and  $\sum P_i = P$ , where  $F$  and  $P$  represent total number of out-migrations of  $F$  and  $P$  estimates for any particular year). Then a simple regression model can be established as follows:

$$F_i = \alpha + \beta \times P_i + e_i \quad (\text{A1})$$

where  $\alpha$  and  $\beta$  are parameters to be estimated, and  $e_i$  indicates the presence of error. It must be noted that our main concern is with statistical relationship or statistical explanation, not with any causal process involved in these two estimates. Fitting Eq. (A1) to every observed annual out-migration data, from 1993/94 to 2000/01 would provide the basic parameters for subsequent estimation.

The second step concerns the derivation of the preliminary modified estimates of out-migrants. Let  $PM_i$  represent the  $PM$  estimates of out-migrations for province or territory  $i$ . The following relation can be written for annual preliminary modified estimates of out-migrations,

$$PM_i = \alpha + \hat{\beta} \times P_i \quad (\text{A2})$$

It should be noted that the parameters in Eq. (A2) are obtained using the regression equation as shown in Eq. (A1). That is, the annual final is regressed on the annual preliminary estimates. This regression procedure has the following features:

- (1) there is an assumption of a one-year lag between the data used for fitting the regression and the reference period of estimating the  $PM$  version of out-migration;
- (2) the previous three-year data on both  $P$  and  $F$  are pooled; and
- (3) the regression is forced to be with zero-constant.

Suppose we would like to estimate  $PM$  out-migration for 1995/96, given the data on  $P$  of the same year. The previous three-year (i.e., 1994/95, 1993/94 and 1992/93) data on  $P$  and on  $F$  estimates are pooled to increase the number of observations and use Eq. (A1) to obtain the annual regression parameters. These annual regression parameters are used to obtain the  $PM$  estimates of out-migrations for 1995/96.

The regression procedure is based on three considerations. (1) There is an approximate one-year lag between  $P$  and  $F$  estimates of migration. In other words, the availability of  $F$  estimates of internal migration lags behind  $P$  estimates by one year. (2) We would like to have a reasonable number of observations for the regression. (3) The zero-constant approach can avoid the  $PM$  with negative numbers. For estimating  $PM$  in-migration, follow the same procedure and fit Eq. (A2) to the observed annual in-migration data to obtain the regression parameters, and use the parameters to obtain modified in-migration estimates.

For deriving the origin-destination migration matrix, we use a one-year lagged migration matrix of  $F$  estimates to redistribute  $PM$  out-migration. This derived migration matrix is evaluated against the matrix of  $F$  estimates using the percentage of migrants misallocated ( $PMIS$ ). An origin or out-migration-constrained model is used for deriving the flow matrix using  $PM$  out-migration and, this model can be specified as

$$PM_{ij} = A_i \times PMO_i \times F_{ij} \quad (A3)$$

subject to constraint

$$\sum_{j \neq i} PM_{ij} = PMO_i \quad (A4)$$

where

$$A_i = \left[ \sum_{j \neq i} F_{ij} \right]^{-1} \quad (A5)$$

where  $PM_{ij}$  is the redistributed or  $PM$  migration from province  $i$  to province  $j$ ,  $PMO_i$  is the total  $PM$  estimates of outmigrants from province  $i$ , and  $F_{ij}$  is the one-year previous migration matrix of the  $F$  estimates. Notice that Eq. (A4) ensures that the total number of outmigrants from the redistributed matrix will match the observed number of outmigrants of the  $PM$  estimates, and Eq. (A5) ensures that this condition be satisfied ( $A_i$  is called the origin balancing factor).

Based on Eqs. (A3) – (A5), the redistribution procedure for  $PM$  estimates of out-migration using a one-year lagged matrix can be expressed by the following statement:

$$\begin{aligned} &\text{Preliminary modified estimates of matrix in year } t = \\ &\text{annual } PM \text{ out-migration in year } t \times \text{lagged annual matrix of} \\ &\text{the } F \text{ estimates in year } t-1 \times \text{the balancing factor } A_i \end{aligned} \quad (A6)$$

Following the convention, the redistribution procedure employs a goodness-of-fit statistic, the percentage of migrants misallocated ( $PMIS$ ), to evaluate the redistributed or preliminary modified migration matrix against the matrix of the  $F$  estimates. The  $PMIS$  between  $PM$  and the  $F$  estimates of migration matrices can be calculated using the following equation:

$$PMIS = \frac{50}{F} \sum_{i,j} |PM_{ij} - F_{ij}|, \quad (A7)$$

Where  $PMIS$  represents the percentage of migrants misallocated in the migration matrix,  $F$  is total number of migrants of final estimates, and  $|PM_{ij} - F_{ij}|$  is the absolute difference between the preliminary modified estimates of migrants and the  $F$  estimates of migrants. Any calculated value for this measure indicates the percentage of migrants that would have to be displaced to other provinces or territories in order for  $PM$  migration matrix to match the matrix of the  $F$  estimates. In other words,

*PMIS* indicates what percentage of migrants would have to be "displaced" to other provinces and territories in order for the modified origin-destination matrix to match the flow matrix of *F* estimates. The *PMIS* for *P* and for preliminary modified estimates can be compared to identify whether the preliminary modified estimates of migration matrix are close to the *F* estimates.

Suppose further we would like to derive the origin-destination flow matrix using both modified out- and modified in-migration. How can such a matrix be derived? Given the vectors of *PM* out- and *PM* in-migration as discussed above, we use an origin-destination migration (or out-migration-in-migration) constrained model to derive the flow matrix. In theory, such a model can be derived by analogue with statistical mechanics as in Wilson (1971). Past application of the model to Canadian data can be found, for example, in Pooler (1987). The model is used for redistributing *PMO* and *PMI*, and can be specified as

$$PM_{ij} = A_i \times PMO_i \times B_j \times PMI_j \times F_{ij} \quad (A8)$$

$$\text{subject to constraints } \sum_{j=1}^n PM_{ij} = PMO_i \quad (j \neq i) \quad (A9)$$

$$\sum_{i=1}^n PM_{ij} = PMI_j \quad (j \neq i) \quad (A10)$$

$$\text{where } A_i = \left[ \sum_{j=1}^n B_j \times PMI_j \times F_{ij} \right]^{-1} \quad (A11)$$

$$B_j = \left[ \sum_{i=1}^n A_i \times PMO_i \times F_{ij} \right]^{-1} \quad (A12)$$

where *PMI<sub>j</sub>* is the total preliminary modified in-migration to province *j*, and all other terms are defined above. Notice that Eqs. (A9) and (A10) ensure that the total number of out-migration and in-migration from the redistributed flow matrix will match the observed number of *PMO* and *PMI* migration. Eqs. (A11) and (A12) ensure that these two conditions be satisfied (*A<sub>i</sub>* is called the origin balancing factor and *B<sub>j</sub>* destination balancing factor).

Based on Eqs. (A8) – (A12), the procedure for redistributing preliminary modified estimates of out-migration and in-migration using a one-year previous final matrix may be expressed by the following statement:

$$\begin{aligned} &\text{Preliminary modified estimates of flow matrix in year } t = \\ &PMO \text{ in year } t \times PMI \text{ in year } t \times \text{matrix of the final} \\ &\text{data in year } t-1 \times \text{the balancing factor } A_i \times \\ &\text{the balancing factor } B_j. \end{aligned} \tag{A13}$$

The goodness-of-fit statistic, the percentage of migrants misallocated (*PMIS*), introduced in Eq. (A7) is still used for the evaluation of the newly derived flow matrix.

**Appendix B. Using the EWMA model to obtain *PMN* migration**

In this method, we have employed the EWMA model (Pindyck and Rubinfeld, 1981) and only  $F$  estimates of net migration to derive *PMN* migration. The model is applied to the data for all the provinces and territories. The net migration data of  $F$  estimates have the following format.

| Province | $t-2$         | $t-1$         | $t$         | $t+1$         |
|----------|---------------|---------------|-------------|---------------|
| 1        | $F(t-2)_1$    | $F(t-1)_1$    | $F(t)_1$    | $F(t+1)_1$    |
| $\vdots$ | $\vdots$      | $\vdots$      | $\vdots$    | $\vdots$      |
| 12       | $F(t-1)_{12}$ | $F(t-1)_{12}$ | $F(t)_{12}$ | $F(t+1)_{12}$ |

For each province or territory, we use  $F$  estimates of net migration from the previous three years and the following EWMA model:

$$F(t+1) = \alpha F(t) + \alpha(1-\alpha)F(t-1) + \alpha(1-\alpha)^2F(t-2)$$

Here the parameter " $\alpha$ " is the number between 0 and 1 that indicates how heavily recent values are weighted relative to earlier ones. For example, when  $\alpha = 1$ , the above equation becomes  $F(t+1) = F(t)$ , and we ignore any values of  $F$  that occurred prior to " $t$ ". As " $\alpha$ " becomes bigger, we place greater emphasis on recent values of  $F$ .

### Appendix C. Net migration estimates using the first difference regression method <sup>2</sup>

In a previous report, we summarized the results of employing five methods to estimate net migration. Overall, net migration estimates are not satisfactory although out- and in- migration estimates are considerably improved (He and Michalowski, 2003b). This note is to propose another method to estimate net migration. The proposed method is based on regressing the first difference of final net migration against that of preliminary net migration. In other words, the difference of final net between year  $t$  and year  $t-1$  is regressed against the difference of preliminary net between year  $t$  and year  $t-1$ . We may call this the first difference regression method. In the following, we first outline the procedure of the method, and then provide the results of estimates.

Let  $FN'_i$  and  $PN'_i$  represent, respectively, the final and preliminary estimate of net migration for province/territory  $i$  ( $i$  is from 1 to 12) in year  $t$ . The first difference of final net and preliminary net can be written as follows:

$$\Delta FN'_i = FN'_i - FN'_{i,t-1} \quad (C1)$$

$$\Delta PN'_i = PN'_i - PN'_{i,t-1} \quad (C2)$$

The regression equation can be in the form of

$$\Delta FN = \beta \Delta PN + \epsilon \quad (C3)$$

In our estimation, Equation (C3) is applied to a two-year difference of  $FN$  and  $PN$ , which virtually requires three-year data on the final net and preliminary net. The general relation between the expected difference of the final net and the difference of preliminary net can be written as

$$\Delta FN_e = \hat{\beta} \Delta PN \quad (C4)$$

Or in the form of Equation (C5)

$$\Delta FN_{e,t+1} = \hat{\beta} \Delta PN_{t+1} = \hat{\beta} (PN_{t+1} - PN_t) \quad (C5)$$

and eventually, the expected final net can be derived from the form of equation (C6)

$$FN'_{e,t+1} = FN'_t + \Delta FN'_{e,t+1} \quad (C6)$$

The actual estimates using the above regression method (suppose that we would like to derive the final net for the year 1994/95) have the following steps:

2. This method was suggested by Réjean Lachapelle, director of Demography Division.

- (1) Calculate  $\Delta FN'_i$  and  $\Delta PN'_i$  for two years to have 24 observations. Specifically,

$$\Delta FN'_{93/94} = FN'_{93/94} - FN'_{92/93}$$

$$\Delta FN'_{92/93} = FN'_{92/93} - FN'_{91/92}$$

- (2) Run the regression to have the regression parameter.  
 (3) Obtain the expected difference of  $FN$ .

$$\Delta FN'_{E, 94/95} = b \Delta PN'_{94/95}$$

- (4) Obtain the expected  $FN$ .

$$FN'_{E, 94/95} = FN'_{93/94} + \Delta FN'_{E, 94/95}$$

In the meantime, outliers, defined as residuals for observations exceeding two standard deviations, were removed from the regression equation. In other words, outliers are the observations with standardised residuals greater than two (Draper and Smith, 1981). As a result, we have run two regressions. One is based on 24 observations (regression 1) and the other based on observations after removing the outliers (regression 2). No further regression is estimated even though there may still be outlier(s) in some cases after regression 2.

## Appendix D. Statistical tables

Table D1: Comparison of annual Preliminary (P), Final (F) estimates of out-, in-, and net- migration, 1993/94 to 2000/01

| Newfoundland and Labrador | Year      | P       | F      | D=P-F  | PD=(4)/(3)*100 |
|---------------------------|-----------|---------|--------|--------|----------------|
| Out-migration             | (1)       | (2)     | (3)    | (4)    | (5)            |
|                           | 1993/94   | 15,037  | 11,532 | 3,505  | 30.39          |
|                           | 1994/95   | 18,867  | 13,380 | 5,487  | 41.01          |
|                           | 1995/96   | 18,238  | 14,441 | 3,797  | 26.29          |
|                           | 1996/97   | 20,196  | 15,096 | 5,100  | 33.78          |
|                           | 1997/98   | 21,251  | 16,882 | 4,369  | 25.88          |
|                           | 1998/99   | 16,613  | 13,690 | 2,923  | 21.35          |
|                           | 1999/2000 | 14,119  | 12,663 | 1,456  | 11.50          |
|                           | 2000/01   | 14,152  | 11,992 | 2,160  | 18.01          |
|                           | Average   | 17,309  | 13,710 | 3,600  | 26.03          |
|                           | sd        | 2,750   | 1,749  | 1,393  | 9.27           |
| In-migration              |           |         |        |        |                |
|                           | 1993/94   | 10,529  | 6,580  | 3,949  | 60.02          |
|                           | 1994/95   | 10,457  | 6,406  | 4,051  | 63.24          |
|                           | 1995/96   | 10,665  | 7,005  | 3,660  | 52.25          |
|                           | 1996/97   | 10,911  | 6,962  | 3,949  | 56.72          |
|                           | 1997/98   | 9,817   | 7,392  | 2,425  | 32.81          |
|                           | 1998/99   | 10,988  | 7,995  | 2,993  | 37.44          |
|                           | 1999/2000 | 11,609  | 8,400  | 3,209  | 38.20          |
|                           | 2000/01   | 10,611  | 7,499  | 3,112  | 41.50          |
|                           | Average   | 10,698  | 7,280  | 3,419  | 47.77          |
|                           | sd        | 511     | 682    | 577    | 11.66          |
| Net-migration             |           |         |        |        |                |
|                           | 1993/94   | -4,508  | -4,952 | 444    | -8.97          |
|                           | 1994/95   | -8,410  | -6,974 | -1,436 | 20.59          |
|                           | 1995/96   | -7,573  | -7,436 | -137   | 1.84           |
|                           | 1996/97   | -9,285  | -8,134 | -1,151 | 14.15          |
|                           | 1997/98   | -11,434 | -9,490 | -1,944 | 20.48          |
|                           | 1998/99   | -5,625  | -5,695 | 70     | -1.23          |
|                           | 1999/2000 | -2,510  | -4,263 | 1,753  | -41.12         |
|                           | 2000/01   | -3,541  | -4,493 | 952    | -21.19         |
|                           | Average   | -6,611  | -6,430 | -181   | -1.93          |
|                           | sd        | 3,076   | 1,880  | 1,259  | 21.51          |

Table D1 (cont.)

| Prince Edward |           |       |       |       |                |
|---------------|-----------|-------|-------|-------|----------------|
| Island        | Year      | P     | F     | D=P-F | PD=(4)/(3)*100 |
| Out-migration | (1)       | (2)   | (3)   | (4)   | (5)            |
|               | 1993/94   | 2,337 | 2,066 | 271   | 13.12          |
|               | 1994/95   | 2,623 | 2,165 | 458   | 21.15          |
|               | 1995/96   | 2,602 | 2,244 | 358   | 15.95          |
|               | 1996/97   | 3,333 | 2,558 | 775   | 30.30          |
|               | 1997/98   | 3,679 | 2,986 | 693   | 23.21          |
|               | 1998/99   | 2,816 | 2,386 | 430   | 18.02          |
|               | 1999/2000 | 2,382 | 2,558 | -176  | -6.88          |
|               | 2000/01   | 2,816 | 2,402 | 414   | 17.24          |
|               | Average   | 2,824 | 2,421 | 403   | 16.51          |
| In-migration  | sd        | 465   | 288   | 288   | 10.81          |
|               | 1993/94   | 2,973 | 2,688 | 285   | 10.60          |
|               | 1994/95   | 3,498 | 2,514 | 984   | 39.14          |
|               | 1995/96   | 3,482 | 2,882 | 600   | 20.82          |
|               | 1996/97   | 3,277 | 2,694 | 583   | 21.64          |
|               | 1997/98   | 2,828 | 2,570 | 258   | 10.04          |
|               | 1998/99   | 2,982 | 2,579 | 403   | 15.63          |
|               | 1999/2000 | 3,361 | 2,662 | 699   | 26.26          |
|               | 2000/01   | 2,887 | 2,567 | 320   | 12.47          |
|               | Average   | 3,161 | 2,645 | 517   | 19.57          |
| Net-migration | sd        | 273   | 116   | 249   | 9.79           |
|               | 1993/94   | 636   | 622   | 14    | 2.25           |
|               | 1994/95   | 875   | 349   | 526   | 150.72         |
|               | 1995/96   | 880   | 638   | 242   | 37.93          |
|               | 1996/97   | -56   | 136   | -192  | -141.18        |
|               | 1997/98   | -851  | -416  | -435  | 104.57         |
|               | 1998/99   | 166   | 193   | -27   | -13.99         |
|               | 1999/2000 | 979   | 104   | 875   | 841.35         |
|               | 2000/01   | 71    | 165   | -94   | -56.97         |
|               | Average   | 338   | 224   | 114   | 115.58         |
|               | sd        | 627   | 334   | 420   | 306.93         |

Table D1 (cont.)

| Nova Scotia   | Year      | P      | F      | D=P-F  | PD=(4)/(3)*100 |
|---------------|-----------|--------|--------|--------|----------------|
| Out-migration | (1)       | (2)    | (3)    | (4)    | (5)            |
|               | 1993/94   | 20,245 | 17,146 | 3,099  | 18.07          |
|               | 1994/95   | 22,700 | 18,040 | 4,660  | 25.83          |
|               | 1995/96   | 21,194 | 17,508 | 3,686  | 21.05          |
|               | 1996/97   | 19,846 | 17,526 | 2,320  | 13.24          |
|               | 1997/98   | 23,055 | 18,873 | 4,182  | 22.16          |
|               | 1998/99   | 16,776 | 15,328 | 1,448  | 9.45           |
|               | 1999/2000 | 17,985 | 16,542 | 1,443  | 8.72           |
|               | 2000/01   | 19,156 | 17,390 | 1,766  | 10.16          |
|               | Average   | 20,120 | 17,294 | 2,826  | 16.09          |
|               | sd        | 2,177  | 1,043  | 1,265  | 6.57           |
| In-migration  |           |        |        |        |                |
|               | 1993/94   | 19,422 | 15,259 | 4,163  | 27.28          |
|               | 1994/95   | 19,883 | 15,299 | 4,584  | 29.96          |
|               | 1995/96   | 20,301 | 16,263 | 4,038  | 24.83          |
|               | 1996/97   | 19,703 | 15,878 | 3,825  | 24.09          |
|               | 1997/98   | 18,015 | 16,304 | 1,711  | 10.49          |
|               | 1998/99   | 17,035 | 15,529 | 1,506  | 9.70           |
|               | 1999/2000 | 18,650 | 16,272 | 2,378  | 14.61          |
|               | 2000/01   | 18,332 | 15,313 | 3,019  | 19.72          |
|               | Average   | 18,918 | 15,765 | 3,153  | 20.09          |
|               | sd        | 1,101  | 469    | 1,178  | 7.73           |
| Net-migration |           |        |        |        |                |
|               | 1993/94   | -823   | -1,887 | 1,064  | -56.39         |
|               | 1994/95   | -2,817 | -2,741 | -76    | 2.77           |
|               | 1995/96   | -893   | -1,245 | 352    | -28.27         |
|               | 1996/97   | -143   | -1,648 | 1,505  | -91.32         |
|               | 1997/98   | -5,040 | -2,569 | -2,471 | 96.19          |
|               | 1998/99   | 259    | 201    | 58     | 28.86          |
|               | 1999/2000 | 665    | -270   | 935    | -346.30        |
|               | 2000/01   | -824   | -2,077 | 1,253  | -60.33         |
|               | Average   | -1,202 | -1,530 | 328    | -56.85         |
|               | sd        | 1,869  | 1,046  | 1,266  | 130.99         |

Table D1 (cont.)

| New Brunswick | Year      | P      | F      | D=P-F | PD=(4)/(3)*100 |
|---------------|-----------|--------|--------|-------|----------------|
| Out-migration | (1)       | (2)    | (3)    | (4)   | (5)            |
|               | 1993/94   | 14,965 | 11,396 | 3,569 | 31.32          |
|               | 1994/95   | 16,130 | 11,666 | 4,464 | 38.27          |
|               | 1995/96   | 14,835 | 12,139 | 2,696 | 22.21          |
|               | 1996/97   | 15,637 | 12,493 | 3,144 | 25.17          |
|               | 1997/98   | 17,259 | 14,096 | 3,163 | 22.44          |
|               | 1998/99   | 13,637 | 11,714 | 1,923 | 16.42          |
|               | 1999/2000 | 13,585 | 12,469 | 1,116 | 8.95           |
|               | 2000/01   | 13,797 | 12,069 | 1,728 | 14.32          |
|               | Average   | 14,981 | 12,255 | 2,725 | 22.39          |
|               | sd        | 1,316  | 838    | 1,091 | 9.42           |
| In-migration  |           |        |        |       |                |
|               | 1993/94   | 15,189 | 10,725 | 4,464 | 41.62          |
|               | 1994/95   | 15,297 | 10,853 | 4,444 | 40.95          |
|               | 1995/96   | 14,607 | 11,770 | 2,837 | 24.10          |
|               | 1996/97   | 13,726 | 11,230 | 2,496 | 22.23          |
|               | 1997/98   | 14,203 | 10,904 | 3,299 | 30.25          |
|               | 1998/99   | 12,706 | 10,470 | 2,236 | 21.36          |
|               | 1999/2000 | 14,109 | 11,286 | 2,823 | 25.01          |
|               | 2000/01   | 13,716 | 10,539 | 3,177 | 30.15          |
|               | Average   | 14,194 | 10,972 | 3,222 | 29.46          |
|               | sd        | 849    | 434    | 832   | 8.00           |
| Net-migration |           |        |        |       |                |
|               | 1993/94   | 224    | -671   | 895   | -133.38        |
|               | 1994/95   | -833   | -813   | -20   | 2.46           |
|               | 1995/96   | -228   | -369   | 141   | -38.21         |
|               | 1996/97   | -1,911 | -1,263 | -648  | 51.31          |
|               | 1997/98   | -3,056 | -3,192 | 136   | -4.26          |
|               | 1998/99   | -931   | -1,244 | 313   | -25.16         |
|               | 1999/2000 | 524    | -1,183 | 1,707 | -144.29        |
|               | 2000/01   | -81    | -1,530 | 1,449 | -94.71         |
|               | Average   | -787   | -1,283 | 497   | -48.28         |
|               | sd        | 1,194  | 858    | 793   | 69.37          |

Table D1 (cont.)

| Quebec        | Year      | P       | F       | D=P-F  | PD=(4)/(3)*100 |
|---------------|-----------|---------|---------|--------|----------------|
|               | (1)       | (2)     | (3)     | (4)    | (5)            |
| Out-migration |           |         |         |        |                |
|               | 1993/94   | 43,884  | 32,535  | 11,349 | 34.88          |
|               | 1994/95   | 43,042  | 32,003  | 11,039 | 34.49          |
|               | 1995/96   | 41,307  | 35,182  | 6,125  | 17.41          |
|               | 1996/97   | 44,334  | 37,873  | 6,461  | 17.06          |
|               | 1997/98   | 43,627  | 37,471  | 6,156  | 16.43          |
|               | 1998/99   | 39,908  | 32,571  | 7,337  | 22.53          |
|               | 1999/2000 | 41,376  | 33,135  | 8,241  | 24.87          |
|               | 2000/01   | 36,616  | 30,783  | 5,833  | 18.95          |
|               | Average   | 41,762  | 33,944  | 7,818  | 23.33          |
|               | sd        | 2,578   | 2,610   | 2,225  | 7.58           |
| In-migration  |           |         |         |        |                |
|               | 1993/94   | 31,356  | 23,777  | 7,579  | 31.88          |
|               | 1994/95   | 27,758  | 23,056  | 4,702  | 20.39          |
|               | 1995/96   | 28,090  | 22,556  | 5,534  | 24.53          |
|               | 1996/97   | 27,709  | 20,437  | 7,272  | 35.58          |
|               | 1997/98   | 26,173  | 20,513  | 5,660  | 27.59          |
|               | 1998/99   | 24,226  | 19,506  | 4,720  | 24.20          |
|               | 1999/2000 | 25,033  | 20,989  | 4,044  | 19.27          |
|               | 2000/01   | 24,834  | 21,341  | 3,493  | 16.37          |
|               | Average   | 26,897  | 21,522  | 5,376  | 24.98          |
|               | sd        | 2,333   | 1,468   | 1,452  | 6.50           |
| Net-migration |           |         |         |        |                |
|               | 1993/94   | -12,528 | -8,758  | -3,770 | 43.05          |
|               | 1994/95   | -15,284 | -8,947  | -6,337 | 70.83          |
|               | 1995/96   | -13,217 | -12,626 | -591   | 4.68           |
|               | 1996/97   | -16,625 | -17,436 | 811    | -4.65          |
|               | 1997/98   | -17,454 | -16,958 | -496   | 2.92           |
|               | 1998/99   | -15,682 | -13,065 | -2,617 | 20.03          |
|               | 1999/2000 | -16,343 | -12,146 | -4,197 | 34.55          |
|               | 2000/01   | -11,782 | -9,442  | -2,340 | 24.78          |
|               | Average   | -14,864 | -12,422 | -2,442 | 24.52          |
|               | sd        | 2,088   | 3,394   | 2,325  | 24.84          |

Table D1 (cont.)

| Ontario       | Year      | P       | F      | D=P-F  | PD=(4)/(3)*100 |
|---------------|-----------|---------|--------|--------|----------------|
| Out-migration | (1)       | (2)     | (3)    | (4)    | (5)            |
|               | 1993/94   | 99,174  | 74,045 | 25,129 | 33.94          |
|               | 1994/95   | 85,609  | 69,743 | 15,866 | 22.75          |
|               | 1995/96   | 89,969  | 71,881 | 18,088 | 25.16          |
|               | 1996/97   | 86,704  | 68,001 | 18,703 | 27.50          |
|               | 1997/98   | 79,018  | 65,985 | 13,033 | 19.75          |
|               | 1998/99   | 65,903  | 56,115 | 9,788  | 17.44          |
|               | 1999/2000 | 71,529  | 56,534 | 14,995 | 26.52          |
|               | 2000/01   | 67,884  | 55,893 | 11,991 | 21.45          |
|               | Average   | 80,724  | 64,775 | 15,949 | 24.32          |
|               | sd        | 11,695  | 7,510  | 4,773  | 5.17           |
| In-migration  |           |         |        |        |                |
|               | 1993/94   | 88,110  | 64,625 | 23,485 | 36.34          |
|               | 1994/95   | 90,211  | 66,902 | 23,309 | 34.84          |
|               | 1995/96   | 84,390  | 69,059 | 15,331 | 22.20          |
|               | 1996/97   | 81,884  | 69,978 | 11,906 | 17.01          |
|               | 1997/98   | 85,680  | 75,216 | 10,464 | 13.91          |
|               | 1998/99   | 82,865  | 72,821 | 10,044 | 13.79          |
|               | 1999/2000 | 91,347  | 78,903 | 12,444 | 15.77          |
|               | 2000/01   | 85,761  | 74,516 | 11,245 | 15.09          |
|               | Average   | 86,281  | 71,503 | 14,779 | 21.12          |
|               | sd        | 3,374   | 4,723  | 5,556  | 9.32           |
| Net-migration |           |         |        |        |                |
|               | 1993/94   | -11,064 | -9,420 | -1,644 | 17.45          |
|               | 1994/95   | 4,602   | -2,841 | 7,443  | -261.99        |
|               | 1995/96   | -5,579  | -2,822 | -2,757 | 97.70          |
|               | 1996/97   | -4,820  | 1,977  | -6,797 | -343.80        |
|               | 1997/98   | 6,662   | 9,231  | -2,569 | -27.83         |
|               | 1998/99   | 16,962  | 16,706 | 256    | 1.53           |
|               | 1999/2000 | 19,818  | 22,369 | -2,551 | -11.40         |
|               | 2000/01   | 17,877  | 18,623 | -746   | -4.01          |
|               | Average   | 5,557   | 6,728  | -1,171 | -66.54         |
|               | sd        | 11,924  | 11,699 | 4,047  | 152.21         |

Table D1 (cont.)

| Manitoba      | Year      | P      | F      | D=P-F | PD=(4)/(3)*100 |
|---------------|-----------|--------|--------|-------|----------------|
| Out-migration | (1)       | (2)    | (3)    | (4)   | (5)            |
|               | 1993/94   | 25,997 | 19,867 | 6,130 | 30.86          |
|               | 1994/95   | 25,448 | 19,110 | 6,338 | 33.17          |
|               | 1995/96   | 22,757 | 18,641 | 4,116 | 22.08          |
|               | 1996/97   | 21,727 | 19,756 | 1,971 | 9.98           |
|               | 1997/98   | 23,073 | 20,182 | 2,891 | 14.32          |
|               | 1998/99   | 19,762 | 16,098 | 3,664 | 22.76          |
|               | 1999/2000 | 20,244 | 17,531 | 2,713 | 15.48          |
|               | 2000/01   | 20,656 | 16,946 | 3,710 | 21.89          |
|               | Average   | 22,458 | 18,516 | 3,942 | 21.32          |
|               | sd        | 2,326  | 1,502  | 1,567 | 7.98           |
| In-migration  |           |        |        |       |                |
|               | 1993/94   | 21,351 | 15,253 | 6,098 | 39.98          |
|               | 1994/95   | 23,286 | 15,890 | 7,396 | 46.54          |
|               | 1995/96   | 20,811 | 15,075 | 5,736 | 38.05          |
|               | 1996/97   | 17,946 | 13,883 | 4,063 | 29.27          |
|               | 1997/98   | 17,690 | 14,906 | 2,784 | 18.68          |
|               | 1998/99   | 18,430 | 13,985 | 4,445 | 31.78          |
|               | 1999/2000 | 18,954 | 14,075 | 4,879 | 34.66          |
|               | 2000/01   | 17,562 | 12,623 | 4,939 | 39.13          |
|               | Average   | 19,504 | 14,461 | 5,043 | 34.76          |
|               | sd        | 2,083  | 1,023  | 1,393 | 8.40           |
| Net-migration |           |        |        |       |                |
|               | 1993/94   | -4,646 | -4,614 | -32   | 0.69           |
|               | 1994/95   | -2,162 | -3,220 | 1,058 | -32.86         |
|               | 1995/96   | -1,946 | -3,566 | 1,620 | -45.43         |
|               | 1996/97   | -3,781 | -5,873 | 2,092 | -35.62         |
|               | 1997/98   | -5,383 | -5,276 | -107  | 2.03           |
|               | 1998/99   | -1,332 | -2,113 | 781   | -36.96         |
|               | 1999/2000 | -1,290 | -3,456 | 2,166 | -62.67         |
|               | 2000/01   | -3,094 | -4,323 | 1,229 | -28.43         |
|               | Average   | -2,954 | -4,055 | 1,101 | -29.91         |
|               | sd        | 1,536  | 1,210  | 866   | 21.92          |

Table D1 (cont.)

| Saskatchewan  | Year      | P       | F      | D=P-F  | PD=(4)/(3)*100 |
|---------------|-----------|---------|--------|--------|----------------|
| Out-migration | (1)       | (2)     | (3)    | (4)    | (5)            |
|               | 1993/94   | 27,500  | 22,259 | 5,241  | 23.55          |
|               | 1994/95   | 27,689  | 20,466 | 7,223  | 35.29          |
|               | 1995/96   | 24,219  | 19,572 | 4,647  | 23.74          |
|               | 1996/97   | 23,360  | 19,565 | 3,795  | 19.40          |
|               | 1997/98   | 24,571  | 20,637 | 3,934  | 19.06          |
|               | 1998/99   | 25,093  | 19,533 | 5,560  | 28.46          |
|               | 1999/2000 | 27,079  | 22,503 | 4,576  | 20.34          |
|               | 2000/01   | 28,950  | 21,395 | 7,555  | 35.31          |
|               | Average   | 26,058  | 20,741 | 5,316  | 25.64          |
|               | sd        | 1,998   | 1,203  | 1,411  | 6.69           |
| In-migration  |           |         |        |        |                |
|               | 1993/94   | 24,560  | 16,828 | 7,732  | 45.95          |
|               | 1994/95   | 23,522  | 16,814 | 6,708  | 39.90          |
|               | 1995/96   | 23,476  | 17,411 | 6,065  | 34.83          |
|               | 1996/97   | 21,774  | 16,771 | 5,003  | 29.83          |
|               | 1997/98   | 21,204  | 18,697 | 2,507  | 13.41          |
|               | 1998/99   | 22,533  | 15,200 | 7,333  | 48.24          |
|               | 1999/2000 | 20,781  | 14,556 | 6,225  | 42.77          |
|               | 2000/01   | 18,497  | 12,985 | 5,512  | 42.45          |
|               | Average   | 22,043  | 16,158 | 5,886  | 37.17          |
|               | sd        | 1,918   | 1,806  | 1,633  | 11.28          |
| Net-migration |           |         |        |        |                |
|               | 1993/94   | -2,940  | -5,431 | 2,491  | -45.87         |
|               | 1994/95   | -4,167  | -3,652 | -515   | 14.10          |
|               | 1995/96   | -743    | -2,161 | 1,418  | -65.62         |
|               | 1996/97   | -1,586  | -2,794 | 1,208  | -43.24         |
|               | 1997/98   | -3,367  | -1,940 | -1,427 | 73.56          |
|               | 1998/99   | -2,560  | -4,333 | 1,773  | -40.92         |
|               | 1999/2000 | -6,298  | -7,947 | 1,649  | -20.75         |
|               | 2000/01   | -10,453 | -8,410 | -2,043 | 24.29          |
|               | Average   | -4,014  | -4,584 | 569    | -13.05         |
|               | sd        | 3,093   | 2,498  | 1,666  | 46.63          |

Table D1 (cont.)

| Alberta       | Year      | P      | F      | D=P-F   | PD=(4)/(3)*100 |
|---------------|-----------|--------|--------|---------|----------------|
|               | (1)       | (2)    | (3)    | (4)     | (5)            |
| Out-migration | 1993/94   | 70,393 | 53,393 | 17,000  | 31.84          |
|               | 1994/95   | 66,727 | 51,803 | 14,924  | 28.81          |
|               | 1995/96   | 61,192 | 49,381 | 11,811  | 23.92          |
|               | 1996/97   | 54,065 | 44,051 | 10,014  | 22.73          |
|               | 1997/98   | 50,442 | 43,218 | 7,224   | 16.72          |
|               | 1998/99   | 54,706 | 45,741 | 8,965   | 19.60          |
|               | 1999/2000 | 60,892 | 48,047 | 12,845  | 26.73          |
|               | 2000/01   | 53,623 | 43,672 | 9,951   | 22.79          |
|               | Average   | 59,005 | 47,413 | 11,592  | 24.14          |
|               | sd        | 6,998  | 3,873  | 3,232   | 4.89           |
| In-migration  | 1993/94   | 65,668 | 51,763 | 13,905  | 26.86          |
|               | 1994/95   | 62,649 | 51,247 | 11,402  | 22.25          |
|               | 1995/96   | 66,931 | 57,037 | 9,894   | 17.35          |
|               | 1996/97   | 78,779 | 70,333 | 8,446   | 12.01          |
|               | 1997/98   | 97,229 | 86,307 | 10,922  | 12.65          |
|               | 1998/99   | 85,770 | 70,932 | 14,838  | 20.92          |
|               | 1999/2000 | 72,685 | 70,721 | 1,964   | 2.78           |
|               | 2000/01   | 79,371 | 64,129 | 15,242  | 23.77          |
|               | Average   | 76,135 | 65,309 | 10,827  | 17.32          |
|               | sd        | 11,608 | 11,821 | 4,318   | 7.85           |
| Net-migration | 1993/94   | -4,725 | -1,630 | -3,095  | 189.88         |
|               | 1994/95   | -4,078 | -556   | -3,522  | 633.45         |
|               | 1995/96   | 5,739  | 7,656  | -1,917  | -25.04         |
|               | 1996/97   | 24,714 | 26,282 | -1,568  | -5.97          |
|               | 1997/98   | 46,787 | 43,089 | 3,698   | 8.58           |
|               | 1998/99   | 31,064 | 25,191 | 5,873   | 23.31          |
|               | 1999/2000 | 11,793 | 22,674 | -10,881 | -47.99         |
|               | 2000/01   | 25,748 | 20,457 | 5,291   | 25.86          |
|               | Average   | 17,130 | 17,895 | -765    | 100.26         |
|               | sd        | 18,092 | 15,186 | 5,580   | 227.14         |

Table D1 (cont.)

| Table D-7 (cont.) |           |         |         |        |                |
|-------------------|-----------|---------|---------|--------|----------------|
| British Columbia  | Year      | P       | F       | D=P-F  | PD=(4)/(3)*100 |
|                   | (1)       | (2)     | (3)     | (4)    | (5)            |
| Out-migration     | 1993/94   | 53,767  | 38,678  | 15,089 | 39.01          |
|                   | 1994/95   | 55,130  | 41,492  | 13,638 | 32.87          |
|                   | 1995/96   | 57,681  | 44,934  | 12,747 | 28.37          |
|                   | 1996/97   | 57,295  | 49,552  | 7,743  | 15.63          |
|                   | 1997/98   | 65,602  | 61,553  | 4,049  | 6.58           |
|                   | 1998/99   | 71,969  | 57,784  | 14,185 | 24.55          |
|                   | 1999/2000 | 65,019  | 58,075  | 6,944  | 11.96          |
|                   | 2000/01   | 62,708  | 51,624  | 11,084 | 21.47          |
|                   | Average   | 61,146  | 50,462  | 10,685 | 22.55          |
|                   | sd        | 6,233   | 8,338   | 3,990  | 10.90          |
| In-migration      | 1993/94   | 95,388  | 76,549  | 18,839 | 24.61          |
|                   | 1994/95   | 87,542  | 70,783  | 16,759 | 23.68          |
|                   | 1995/96   | 81,141  | 66,959  | 14,182 | 21.18          |
|                   | 1996/97   | 71,582  | 59,432  | 12,150 | 20.44          |
|                   | 1997/98   | 61,372  | 51,524  | 9,848  | 19.11          |
|                   | 1998/99   | 50,866  | 43,300  | 7,566  | 17.47          |
|                   | 1999/2000 | 57,866  | 43,465  | 14,401 | 33.13          |
|                   | 2000/01   | 50,019  | 43,338  | 6,681  | 15.42          |
|                   | Average   | 69,472  | 56,919  | 12,553 | 21.88          |
|                   | sd        | 17,170  | 13,441  | 4,311  | 5.46           |
| Net-migration     | 1993/94   | 41,621  | 37,871  | 3,750  | 9.90           |
|                   | 1994/95   | 32,412  | 29,291  | 3,121  | 10.66          |
|                   | 1995/96   | 23,460  | 22,025  | 1,435  | 6.52           |
|                   | 1996/97   | 14,287  | 9,880   | 4,407  | 44.61          |
|                   | 1997/98   | -4,230  | -10,029 | 5,799  | -57.82         |
|                   | 1998/99   | -21,103 | -14,484 | -6,619 | 45.70          |
|                   | 1999/2000 | -7,153  | -14,610 | 7,457  | -51.04         |
|                   | 2000/01   | -12,689 | -8,286  | -4,403 | 53.14          |
|                   | Average   | 8,326   | 6,457   | 1,868  | 7.71           |
|                   | sd        | 22,860  | 21,159  | 4,925  | 42.48          |

Table D1 (cont.)

| Yukon Territory | Year      | P      | F      | D=P-F | PD=(4)/(3)*100 |
|-----------------|-----------|--------|--------|-------|----------------|
|                 | (1)       | (2)    | (3)    | (4)   | (5)            |
| Out-migration   |           |        |        |       |                |
|                 | 1993/94   | 2,845  | 2,652  | 193   | 7.28           |
|                 | 1994/95   | 2,289  | 1,798  | 491   | 27.31          |
|                 | 1995/96   | 2,073  | 1,639  | 434   | 26.48          |
|                 | 1996/97   | 2,464  | 1,959  | 505   | 25.78          |
|                 | 1997/98   | 2,663  | 2,526  | 137   | 5.42           |
|                 | 1998/99   | 2,878  | 2,053  | 825   | 40.19          |
|                 | 1999/2000 | 2,321  | 1,958  | 363   | 18.54          |
|                 | 2000/01   | 2,311  | 1,725  | 586   | 33.97          |
|                 | Average   | 2,481  | 2,039  | 442   | 23.12          |
|                 | sd        | 288    | 367    | 219   | 12.13          |
| In-migration    |           |        |        |       |                |
|                 | 1993/94   | 1,969  | 1,558  | 411   | 26.38          |
|                 | 1994/95   | 2,383  | 2,067  | 316   | 15.29          |
|                 | 1995/96   | 2,874  | 2,203  | 671   | 30.46          |
|                 | 1996/97   | 2,332  | 1,905  | 427   | 22.41          |
|                 | 1997/98   | 1,734  | 1,502  | 232   | 15.45          |
|                 | 1998/99   | 1,606  | 1,306  | 300   | 22.97          |
|                 | 1999/2000 | 1,679  | 1,267  | 412   | 32.52          |
|                 | 2000/01   | 1,465  | 1,153  | 312   | 27.06          |
|                 | Average   | 2,005  | 1,620  | 385   | 24.07          |
|                 | sd        | 484    | 393    | 134   | 6.35           |
| Net-migration   |           |        |        |       |                |
|                 | 1993/94   | -876   | -1,094 | 218   | -19.93         |
|                 | 1994/95   | 94     | 269    | -175  | -65.06         |
|                 | 1995/96   | 801    | 564    | 237   | 42.02          |
|                 | 1996/97   | -132   | -54    | -78   | 144.44         |
|                 | 1997/98   | -929   | -1,024 | 95    | -9.28          |
|                 | 1998/99   | -1,272 | -747   | -525  | 70.28          |
|                 | 1999/2000 | -642   | -691   | 49    | -7.09          |
|                 | 2000/01   | -846   | -572   | -274  | 47.90          |
|                 | Average   | -475   | -419   | -57   | 25.41          |
|                 | sd        | 680    | 609    | 261   | 64.88          |

Table D1 (concl.)

| Northwest Territories | Year      | P      | F      | D=P-F | PD=(4)/(3)*100 |
|-----------------------|-----------|--------|--------|-------|----------------|
|                       | (1)       | (2)    | (3)    | (4)   | (5)            |
| Out-migration         |           |        |        |       |                |
|                       | 1993/94   | 4 444  | 3 339  | 1 105 | 33.09          |
|                       | 1994/95   | 4 373  | 3 302  | 1 071 | 32.43          |
|                       | 1995/96   | 4 551  | 3 723  | 828   | 22.24          |
|                       | 1996/97   | 4 188  | 3 917  | 271   | 6.92           |
|                       | 1997/98   | 4 590  | 4 249  | 341   | 8.03           |
|                       | 1998/99   | 3 347  | 3 459  | -112  | -3.24          |
|                       | 1999/2000 | 2 965  | 3 399  | -434  | -12.77         |
|                       | 2000/01   | 3 907  | 2 958  | 949   | 32.08          |
|                       | Average   | 4 046  | 3 543  | 502   | 14.85          |
|                       | sd        | 599    | 404    | 576   | 17.70          |
| In-migration          |           |        |        |       |                |
|                       | 1993/94   | 4 073  | 3 303  | 770   | 23.31          |
|                       | 1994/95   | 4 141  | 3 137  | 1 004 | 32.01          |
|                       | 1995/96   | 3 850  | 3 065  | 785   | 25.61          |
|                       | 1996/97   | 3 526  | 2 844  | 682   | 23.98          |
|                       | 1997/98   | 2 885  | 2 823  | 62    | 2.20           |
|                       | 1998/99   | 3 401  | 2 849  | 552   | 19.38          |
|                       | 1999/2000 | 3 422  | 2 818  | 604   | 21.43          |
|                       | 2000/01   | 3 521  | 2 846  | 675   | 23.72          |
|                       | Average   | 3 602  | 2 961  | 642   | 21.45          |
|                       | sd        | 409    | 184    | 272   | 8.61           |
| Net-migration         |           |        |        |       |                |
|                       | 1993/94   | -371   | -36    | -335  | 930.56         |
|                       | 1994/95   | -232   | -165   | -67   | 40.61          |
|                       | 1995/96   | -701   | -658   | -43   | 6.53           |
|                       | 1996/97   | -662   | -1 073 | 411   | -38.30         |
|                       | 1997/98   | -1 705 | -1 426 | -279  | 19.57          |
|                       | 1998/99   | 54     | -610   | 664   | -108.85        |
|                       | 1999/2000 | 457    | -581   | 1 038 | -178.66        |
|                       | 2000/01   | -386   | -112   | -274  | 244.64         |
|                       | Average   | -443   | -583   | 139   | 114.51         |
|                       | sd        | 634    | 486    | 508   | 352.17         |

Table D2: Preliminary estimates of interprovincial migration matrix, 1993/94 to 2000/01

| 1993/94 | N.L.   | P.E.I. | N.S.   | N.B.   | Que.    | Ont.    | Man.   | Sask.  | Alta.  | B.C.   | Y.T.  | N.W.T. |
|---------|--------|--------|--------|--------|---------|---------|--------|--------|--------|--------|-------|--------|
| N.L.    | 0      | 241    | 2,326  | 729    | 337     | 7,329   | 267    | 157    | 1,513  | 1,800  | 46    | 292    |
| P.E.I.  | 102    | 0      | 422    | 514    | 67      | 728     | 44     | 50     | 201    | 197    | 0     | 12     |
| N.S.    | 1,809  | 696    | 0      | 2,896  | 1,186   | 7,442   | 585    | 269    | 1,995  | 3,112  | 30    | 225    |
| N.B.    | 501    | 424    | 2,849  | 0      | 2,409   | 5,472   | 366    | 121    | 1,326  | 1,267  | 13    | 217    |
| Que.    | 349    | 157    | 1,233  | 2,557  | 0       | 29,359  | 639    | 377    | 2,296  | 6,671  | 108   | 138    |
| Ont.    | 5,623  | 985    | 8,149  | 5,802  | 21,340  | 0       | 6,807  | 3,021  | 15,052 | 31,487 | 293   | 615    |
| Man.    | 156    | 50     | 463    | 381    | 777     | 7,338   | 0      | 3,592  | 5,608  | 7,209  | 56    | 367    |
| Sask.   | 87     | 34     | 291    | 140    | 333     | 2,506   | 3,441  | 0      | 13,446 | 6,828  | 63    | 331    |
| Alta.   | 1,052  | 226    | 1,662  | 1,082  | 1,868   | 11,816  | 4,618  | 12,040 | 0      | 34,411 | 436   | 1,182  |
| B.C.    | 623    | 133    | 1,902  | 966    | 2,884   | 15,642  | 4,147  | 4,357  | 21,755 | 0      | 785   | 573    |
| Y.T.    | 28     | 0      | 11     | 24     | 39      | 101     | 85     | 176    | 660    | 1,600  | 0     | 121    |
| N.W.T.  | 199    | 27     | 114    | 98     | 116     | 377     | 352    | 400    | 1,816  | 806    | 139   | 0      |
| IN      | 10,529 | 2,973  | 19,422 | 15,189 | 31,356  | 88,110  | 21,351 | 24,560 | 65,668 | 95,388 | 1,969 | 4,073  |
| OUT     | 15,037 | 2,337  | 20,245 | 14,965 | 43,884  | 99,174  | 25,997 | 27,500 | 70,393 | 53,767 | 2,845 | 4,444  |
| NET     | -4,508 | 636    | -823   | 224    | -12,528 | -11,064 | -4,646 | -2,940 | -4,725 | 41,621 | -876  | -371   |

  

| 1994/95 | N.L.   | P.E.I. | N.S.   | N.B.   | Que.    | Ont.   | Man.   | Sask.  | Alta.  | B.C.   | Y.T.  | N.W.T. |
|---------|--------|--------|--------|--------|---------|--------|--------|--------|--------|--------|-------|--------|
| N.L.    | 0      | 208    | 2,710  | 815    | 382     | 9,140  | 314    | 116    | 2,447  | 2,204  | 61    | 470    |
| P.E.I.  | 157    | 0      | 624    | 435    | 65      | 757    | 43     | 33     | 207    | 298    | 4     | 0      |
| N.S.    | 1,804  | 955    | 0      | 3,441  | 1,105   | 8,208  | 555    | 396    | 2,295  | 3,688  | 56    | 197    |
| N.B.    | 545    | 719    | 3,191  | 0      | 2,618   | 5,580  | 396    | 157    | 1,546  | 1,306  | 0     | 72     |
| Que.    | 351    | 92     | 1,098  | 3,035  | 0       | 28,143 | 719    | 346    | 1,954  | 7,101  | 28    | 175    |
| Ont.    | 5,379  | 986    | 7,404  | 4,891  | 18,017  | 0      | 7,204  | 2,490  | 12,113 | 26,425 | 194   | 506    |
| Man.    | 197    | 45     | 510    | 429    | 699     | 7,180  | 0      | 4,020  | 5,112  | 6,871  | 46    | 339    |
| Sask.   | 87     | 64     | 270    | 215    | 279     | 3,219  | 4,249  | 0      | 12,971 | 5,923  | 86    | 326    |
| Alta.   | 1,027  | 163    | 1,910  | 1,065  | 1,655   | 11,412 | 5,025  | 10,793 | 0      | 31,649 | 633   | 1,395  |
| B.C.    | 750    | 262    | 1,973  | 861    | 2,745   | 15,846 | 4,368  | 4,874  | 21,828 | 0      | 1,124 | 499    |
| Y.T.    | 0      | 4      | 9      | 16     | 39      | 133    | 17     | 41     | 560    | 1,308  | 0     | 162    |
| N.W.T.  | 160    | 0      | 184    | 94     | 154     | 593    | 396    | 256    | 1,616  | 769    | 151   | 0      |
| IN      | 10,457 | 3,498  | 19,883 | 15,297 | 27,758  | 90,211 | 23,286 | 23,522 | 62,649 | 87,542 | 2,383 | 4,141  |
| OUT     | 18,867 | 2,623  | 22,700 | 16,130 | 43,042  | 85,609 | 25,448 | 27,689 | 66,727 | 55,130 | 2,289 | 4,373  |
| NET     | -8,410 | 875    | -2,817 | -833   | -15,284 | 4,602  | -2,162 | -4,167 | -4,078 | 32,412 | 94    | -232   |

  

| 1995/96 | N.L.   | P.E.I. | N.S.   | N.B.   | Que.    | Ont.   | Man.   | Sask.  | Alta.  | B.C.   | Y.T.  | N.W.T. |
|---------|--------|--------|--------|--------|---------|--------|--------|--------|--------|--------|-------|--------|
| N.L.    | 0      | 305    | 2,629  | 848    | 351     | 7,890  | 434    | 111    | 2,747  | 2,350  | 170   | 403    |
| P.E.I.  | 230    | 0      | 470    | 560    | 43      | 773    | 60     | 38     | 179    | 240    | 0     | 9      |
| N.S.    | 1,577  | 830    | 0      | 2,897  | 946     | 7,976  | 590    | 300    | 2,773  | 3,080  | 41    | 184    |
| N.B.    | 687    | 540    | 2,683  | 0      | 2,444   | 4,874  | 332    | 216    | 1,494  | 1,433  | 22    | 110    |
| Que.    | 287    | 99     | 1,137  | 2,593  | 0       | 27,522 | 708    | 438    | 2,131  | 6,157  | 61    | 174    |
| Ont.    | 5,360  | 1,077  | 8,115  | 4,960  | 19,153  | 0      | 6,348  | 2,581  | 13,668 | 28,093 | 233   | 381    |
| Man.    | 97     | 117    | 442    | 323    | 528     | 6,346  | 0      | 3,216  | 5,636  | 5,602  | 104   | 346    |
| Sask.   | 63     | 33     | 337    | 138    | 387     | 2,498  | 3,522  | 0      | 11,625 | 5,243  | 153   | 220    |
| Alta.   | 1,222  | 288    | 1,912  | 1,245  | 1,564   | 10,368 | 4,071  | 11,027 | 0      | 27,322 | 723   | 1,450  |
| B.C.    | 930    | 155    | 2,450  | 911    | 2,482   | 15,418 | 4,256  | 4,974  | 24,326 | 0      | 1,260 | 519    |
| Y.T.    | 13     | 9      | 32     | 16     | 27      | 214    | 67     | 75     | 542    | 1,024  | 0     | 54     |
| N.W.T.  | 199    | 29     | 94     | 116    | 165     | 511    | 423    | 500    | 1,810  | 597    | 107   | 0      |
| IN      | 10,665 | 3,482  | 20,301 | 14,607 | 28,090  | 84,390 | 20,811 | 23,476 | 66,931 | 81,141 | 2,874 | 3,850  |
| OUT     | 18,238 | 2,602  | 21,194 | 14,835 | 41,307  | 89,969 | 22,757 | 24,219 | 61,192 | 57,681 | 2,073 | 4,551  |
| NET     | -7,573 | 880    | -893   | -228   | -13,217 | -5,579 | -1,946 | -743   | 5,739  | 23,460 | 801   | -701   |

Research on modifications to the method of preliminary estimates of interprovincial migration

Table D2 (cont.)

| 1996/97 | N.L.   | P.E.I. | N.S.   | N.B.   | Que.    | Ont.   | Man.   | Sask.  | Alta.  | B.C.   | Y.T.  | N.W.T. |
|---------|--------|--------|--------|--------|---------|--------|--------|--------|--------|--------|-------|--------|
| N.L.    | 0      | 185    | 2,372  | 751    | 400     | 7,889  | 348    | 222    | 5,429  | 2,011  | 124   | 465    |
| P.E.I.  | 364    | 0      | 923    | 496    | 80      | 931    | 83     | 9      | 242    | 184    | 21    | 0      |
| N.S.    | 1,462  | 955    | 0      | 2,999  | 1,069   | 6,530  | 574    | 229    | 3,043  | 2,697  | 125   | 163    |
| N.B.    | 778    | 679    | 2,972  | 0      | 2,518   | 4,741  | 301    | 223    | 1,912  | 1,353  | 25    | 135    |
| Que.    | 262    | 73     | 1,190  | 2,841  | 0       | 28,457 | 763    | 446    | 4,056  | 5,979  | 57    | 210    |
| Ont.    | 5,419  | 828    | 7,191  | 4,504  | 18,533  | 0      | 5,881  | 2,524  | 16,278 | 24,976 | 190   | 380    |
| Man.    | 204    | 43     | 492    | 216    | 428     | 5,674  | 0      | 3,587  | 5,949  | 4,778  | 64    | 292    |
| Sask.   | 95     | 31     | 373    | 137    | 240     | 2,502  | 3,032  | 0      | 12,611 | 4,025  | 73    | 241    |
| Alta.   | 1,198  | 226    | 1,529  | 843    | 1,348   | 10,420 | 3,503  | 9,774  | 0      | 23,816 | 375   | 1,033  |
| B.C.    | 897    | 227    | 2,427  | 884    | 2,908   | 14,134 | 3,083  | 4,278  | 26,949 | 0      | 1,001 | 507    |
| Y.T.    | 43     | 12     | 80     | 11     | 27      | 140    | 42     | 151    | 747    | 1,131  | 0     | 100    |
| N.W.T.  | 189    | 18     | 174    | 44     | 158     | 466    | 336    | 331    | 1,563  | 632    | 277   | 0      |
| IN      | 10,911 | 3,277  | 19,703 | 13,726 | 27,709  | 81,634 | 17,946 | 21,774 | 78,779 | 71,582 | 2,332 | 3,526  |
| OUT     | 20,196 | 3,333  | 19,846 | 15,637 | 44,334  | 86,704 | 21,727 | 23,360 | 54,065 | 57,295 | 2,464 | 4,188  |
| NET     | -9,285 | -56    | -143   | -1,911 | -16,625 | -4,820 | -3,781 | -1,586 | 24,711 | 14,287 | -132  | -662   |

  

| 1997/98 | N.L.    | P.E.I. | N.S.   | N.B.   | Que.    | Ont.   | Man.   | Sask.  | Alta.  | B.C.   | Y.T.  | N.W.T. |
|---------|---------|--------|--------|--------|---------|--------|--------|--------|--------|--------|-------|--------|
| N.L.    | 0       | 293    | 2,240  | 948    | 410     | 7,491  | 294    | 413    | 7,272  | 1,436  | 88    | 366    |
| P.E.I.  | 93      | 0      | 762    | 565    | 189     | 913    | 103    | 59     | 740    | 255    | 0     | 0      |
| N.S.    | 1,634   | 610    | 0      | 2,925  | 993     | 8,417  | 525    | 425    | 4,762  | 2,604  | 60    | 100    |
| N.B.    | 662     | 389    | 3,052  | 0      | 2,375   | 5,270  | 310    | 309    | 3,457  | 1,394  | 0     | 61     |
| Que.    | 282     | 110    | 1,132  | 2,741  | 0       | 28,446 | 654    | 330    | 4,455  | 5,246  | 33    | 198    |
| Ont.    | 4,026   | 885    | 6,235  | 4,254  | 17,160  | 0      | 5,648  | 2,194  | 17,172 | 20,821 | 145   | 478    |
| Man.    | 151     | 70     | 540    | 316    | 475     | 5,908  | 0      | 3,679  | 7,046  | 4,597  | 86    | 205    |
| Sask.   | 152     | 21     | 142    | 132    | 256     | 2,342  | 2,795  | 0      | 14,458 | 3,935  | 75    | 263    |
| Alta.   | 1,574   | 287    | 1,912  | 1,268  | 1,245   | 10,508 | 3,410  | 9,518  | 0      | 19,448 | 414   | 858    |
| B.C.    | 921     | 163    | 1,710  | 958    | 2,905   | 15,708 | 3,632  | 3,762  | 34,769 | 0      | 766   | 308    |
| Y.T.    | 113     | 0      | 19     | 7      | 47      | 177    | 53     | 166    | 989    | 1,044  | 0     | 48     |
| N.W.T.  | 209     | 20     | 271    | 89     | 118     | 500    | 266    | 349    | 2,109  | 592    | 67    | 0      |
| IN      | 9,817   | 2,828  | 18,015 | 14,203 | 26,173  | 85,680 | 17,690 | 21,204 | 97,229 | 61,372 | 1,734 | 2,885  |
| OUT     | 21,251  | 3,679  | 23,055 | 17,259 | 43,627  | 79,018 | 23,073 | 24,571 | 50,442 | 65,602 | 2,663 | 4,590  |
| NET     | -11,434 | -851   | -5,040 | -3,056 | -17,454 | 6,662  | -5,383 | -3,367 | 46,787 | -4,230 | -929  | -1,705 |

  

| 1998/99 | N.L.   | P.E.I. | N.S.   | N.B.   | Que.    | Ont.   | Man.   | Sask.  | Alta.  | B.C.    | Y.T.   | N.W.T. |
|---------|--------|--------|--------|--------|---------|--------|--------|--------|--------|---------|--------|--------|
| N.L.    | 0      | 463    | 2,115  | 897    | 282     | 6,793  | 284    | 253    | 4,416  | 759     | 19     | 332    |
| P.E.I.  | 134    | 0      | 744    | 523    | 131     | 657    | 14     | 64     | 301    | 243     | 5      | 0      |
| N.S.    | 1,344  | 554    | 0      | 2,699  | 796     | 5,682  | 539    | 213    | 3,076  | 1,645   | 64     | 164    |
| N.B.    | 494    | 445    | 2,988  | 0      | 2,051   | 4,280  | 244    | 171    | 1,969  | 706     | 123    | 166    |
| Que.    | 266    | 238    | 851    | 2,104  | 0       | 27,896 | 513    | 338    | 3,750  | 3,764   | 46     | 142    |
| Ont.    | 4,276  | 656    | 5,387  | 3,773  | 15,004  | 0      | 5,258  | 2,493  | 13,134 | 15,260  | 156    | 506    |
| Man.    | 227    | 48     | 377    | 159    | 338     | 5,576  | 0      | 4,205  | 5,247  | 3,360   | 33     | 192    |
| Sask.   | 220    | 38     | 203    | 126    | 310     | 2,630  | 3,707  | 0      | 13,747 | 3,694   | 82     | 336    |
| Alta.   | 2,786  | 287    | 2,348  | 1,482  | 1,695   | 11,053 | 3,684  | 10,204 | 0      | 19,851  | 227    | 1,089  |
| B.C.    | 967    | 231    | 1,932  | 883    | 3,474   | 17,634 | 3,936  | 4,314  | 37,503 | 0       | 713    | 382    |
| Y.T.    | 84     | 22     | 47     | 10     | 31      | 263    | 73     | 70     | 1,021  | 1,165   | 0      | 92     |
| N.W.T.  | 190    | 0      | 43     | 50     | 114     | 401    | 178    | 208    | 1,606  | 419     | 138    | 0      |
| IN      | 10,986 | 2,982  | 17,035 | 12,706 | 24,226  | 82,865 | 18,430 | 22,533 | 85,770 | 50,866  | 1,606  | 3,401  |
| OUT     | 16,613 | 2,816  | 16,776 | 13,637 | 39,908  | 65,903 | 19,762 | 25,093 | 54,706 | 71,969  | 2,878  | 3,347  |
| NET     | -5,625 | 166    | 259    | -931   | -15,682 | 16,962 | -1,332 | -2,560 | 31,064 | -21,103 | -1,272 | 54     |

## Research on modifications to the method of preliminary estimates of interprovincial migration

Table D2 (concl.)

| 1999/2000 | N.L.   | P.E.I. | N.S.   | N.B.   | Que.    | Ont.   | Man.   | Sask.  | Alta.  | B.C.   | Y.T.  | N.W.T. |
|-----------|--------|--------|--------|--------|---------|--------|--------|--------|--------|--------|-------|--------|
| N.L.      | 0      | 430    | 2,198  | 809    | 138     | 6,492  | 187    | 120    | 2,769  | 619    | 56    | 301    |
| P.E.I.    | 167    | 0      | 610    | 501    | 45      | 652    | 10     | 22     | 182    | 174    | 9     | 10     |
| N.S.      | 1,520  | 694    | 0      | 3,232  | 772     | 6,902  | 444    | 251    | 2,331  | 1,612  | 30    | 197    |
| N.B.      | 546    | 658    | 3,091  | 0      | 2,255   | 4,137  | 239    | 127    | 1,511  | 892    | 42    | 87     |
| Que.      | 362    | 123    | 1,073  | 2,184  | 0       | 30,300 | 704    | 269    | 2,524  | 3,642  | 42    | 153    |
| Ont.      | 4,672  | 841    | 6,106  | 4,528  | 16,215  | 0      | 5,459  | 2,434  | 11,208 | 19,211 | 201   | 654    |
| Man.      | 191    | 41     | 517    | 246    | 568     | 6,135  | 0      | 3,491  | 5,044  | 3,898  | 25    | 88     |
| Sask.     | 167    | 42     | 436    | 108    | 174     | 3,413  | 3,871  | 0      | 14,475 | 4,134  | 58    | 201    |
| Alta.     | 2,763  | 264    | 2,694  | 1,673  | 1,992   | 13,196 | 4,214  | 10,236 | 0      | 22,331 | 374   | 1,155  |
| B.C.      | 1,066  | 264    | 1,755  | 766    | 2,759   | 19,437 | 3,542  | 3,576  | 30,707 | 0      | 738   | 409    |
| Y.T.      | 26     | 4      | 35     | 0      | 29      | 234    | 92     | 81     | 688    | 965    | 0     | 167    |
| N.W.T.    | 129    | 0      | 135    | 62     | 86      | 449    | 192    | 174    | 1,246  | 388    | 104   | 0      |
| IN        | 11,609 | 3,361  | 18,650 | 14,109 | 25,033  | 91,347 | 18,954 | 20,781 | 72,685 | 57,866 | 1,679 | 3,422  |
| OUT       | 14,119 | 2,382  | 17,985 | 13,585 | 41,376  | 71,529 | 20,244 | 27,079 | 60,892 | 65,019 | 2,321 | 2,965  |
| NET       | -2,510 | 979    | 665    | 524    | -16,343 | 19,818 | -1,290 | -6,298 | 11,793 | -7,153 | -642  | 457    |

  

| 2000/01 | N.L.   | P.E.I. | N.S.   | N.B.   | Que.    | Ont.   | Man.   | Sask.   | Alta.  | B.C.    | Y.T.  | N.W.T. |
|---------|--------|--------|--------|--------|---------|--------|--------|---------|--------|---------|-------|--------|
| N.L.    | 0      | 299    | 1,947  | 949    | 203     | 6,112  | 152    | 176     | 3,513  | 565     | 15    | 221    |
| P.E.I.  | 201    | 0      | 747    | 353    | 176     | 654    | 20     | 11      | 295    | 277     | 9     | 73     |
| N.S.    | 1,543  | 631    | 0      | 3,247  | 1,117   | 7,406  | 332    | 343     | 2,766  | 1,512   | 42    | 217    |
| N.B.    | 546    | 482    | 3,057  | 0      | 2,028   | 4,559  | 264    | 113     | 1,835  | 744     | 85    | 84     |
| Que.    | 206    | 142    | 870    | 2,444  | 0       | 26,384 | 495    | 315     | 2,735  | 2,689   | 52    | 284    |
| Ont.    | 4,620  | 842    | 6,876  | 3,917  | 15,968  | 0      | 5,322  | 1,696   | 12,639 | 15,173  | 127   | 704    |
| Man.    | 186    | 29     | 389    | 308    | 457     | 6,169  | 0      | 3,409   | 5,724  | 3,718   | 31    | 236    |
| Sask.   | 149    | 29     | 369    | 91     | 295     | 2,964  | 4,015  | 0       | 16,828 | 3,982   | 89    | 139    |
| Alta.   | 2,153  | 248    | 2,057  | 1,514  | 1,858   | 11,869 | 3,752  | 9,000   | 0      | 19,847  | 292   | 1,033  |
| B.C.    | 714    | 157    | 1,932  | 818    | 2,576   | 18,868 | 2,890  | 3,127   | 30,627 | 0       | 625   | 374    |
| Y.T.    | 22     | 7      | 17     | 9      | 8       | 122    | 40     | 58      | 861    | 1,011   | 0     | 156    |
| N.W.T.  | 271    | 21     | 71     | 66     | 148     | 654    | 280    | 249     | 1,548  | 501     | 98    | 0      |
| IN      | 10,611 | 2,887  | 18,332 | 13,716 | 24,834  | 85,761 | 17,562 | 18,497  | 79,371 | 50,019  | 1,465 | 3,521  |
| OUT     | 14,152 | 2,816  | 19,156 | 13,797 | 36,616  | 67,884 | 20,656 | 28,950  | 53,623 | 62,708  | 2,311 | 3,907  |
| NET     | -3,541 | 71     | -824   | -81    | -11,782 | 17,877 | -3,094 | -10,453 | 25,748 | -12,689 | -846  | -386   |

Table D3: Final estimates of interprovincial migration matrix, 1993/94 to 2000/01

| 1993/94 | N.L.   | P.E.I. | N.S.   | N.B.   | Que.   | Ont.   | Man.   | Sask.  | Alta.  | B.C.   | Y.T.   | N.W.T. |
|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| N.L.    | 0      | 214    | 1,977  | 596    | 323    | 4,859  | 197    | 100    | 1,340  | 1,611  | 41     | 274    |
| P.E.I.  | 93     | 0      | 490    | 332    | 92     | 579    | 22     | 45     | 188    | 221    | 1      | 3      |
| N.S.    | 1,168  | 638    | 0      | 2,439  | 942    | 6,268  | 485    | 232    | 1,734  | 3,020  | 25     | 195    |
| N.B.    | 369    | 408    | 2,391  | 0      | 1,893  | 3,599  | 286    | 136    | 1,106  | 1,115  | 10     | 83     |
| Que.    | 313    | 131    | 994    | 1,914  | 0      | 21,035 | 522    | 258    | 1,897  | 5,297  | 51     | 123    |
| Ont.    | 3,096  | 877    | 5,746  | 3,475  | 15,826 | 0      | 4,618  | 2,384  | 11,928 | 25,343 | 164    | 588    |
| Man.    | 159    | 36     | 424    | 341    | 579    | 4,944  | 0      | 2,583  | 4,612  | 5,910  | 51     | 228    |
| Sask.   | 87     | 47     | 261    | 101    | 336    | 2,151  | 2,556  | 0      | 10,900 | 5,455  | 93     | 272    |
| Alta.   | 722    | 175    | 1,325  | 743    | 1,529  | 9,706  | 3,474  | 7,772  | 0      | 26,524 | 353    | 1,070  |
| B.C.    | 407    | 139    | 1,469  | 666    | 2,047  | 10,886 | 2,769  | 2,956  | 16,303 | 0      | 658    | 378    |
| Y.T.    | 61     | 5      | 47     | 22     | 28     | 158    | 77     | 119    | 610    | 1,436  | 0      | 89     |
| N.W.T.  | 105    | 18     | 135    | 96     | 182    | 440    | 247    | 243    | 1,145  | 617    | 111    | 0      |
| IN      | 6,580  | 2,688  | 15,259 | 10,725 | 23,777 | 64,625 | 15,253 | 16,828 | 51,763 | 76,549 | 1,558  | 3,303  |
| OUT     | 11,532 | 2,066  | 17,146 | 11,396 | 32,535 | 74,045 | 19,867 | 22,259 | 53,393 | 38,678 | 2,652  | 3,339  |
| NET     | -4,952 | 622    | -1,887 | -671   | -8,758 | -9,420 | -4,614 | -5,431 | -1,630 | 37,871 | -1,094 | -36    |

  

| 1994/95 | N.L.   | P.E.I. | N.S.   | N.B.   | Que.   | Ont.   | Man.   | Sask.  | Alta.  | B.C.   | Y.T.  | N.W.T. |
|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|--------|
| N.L.    | 0      | 217    | 1,879  | 628    | 246    | 5,745  | 273    | 99     | 1,968  | 1,984  | 59    | 282    |
| P.E.I.  | 80     | 0      | 517    | 353    | 66     | 627    | 36     | 34     | 228    | 207    | 3     | 14     |
| N.S.    | 1,259  | 643    | 0      | 2,512  | 984    | 6,445  | 560    | 280    | 2,175  | 2,965  | 56    | 161    |
| N.B.    | 381    | 391    | 2,284  | 0      | 2,007  | 3,674  | 322    | 141    | 1,191  | 1,173  | 18    | 84     |
| Que.    | 305    | 101    | 1,007  | 1,878  | 0      | 20,663 | 605    | 312    | 1,788  | 5,168  | 39    | 137    |
| Ont.    | 2,880  | 766    | 5,756  | 3,494  | 15,036 | 0      | 4,702  | 1,958  | 10,952 | 23,530 | 217   | 452    |
| Man.    | 120    | 25     | 456    | 283    | 581    | 4,980  | 0      | 2,483  | 4,757  | 5,191  | 41    | 193    |
| Sask.   | 82     | 50     | 246    | 162    | 282    | 2,289  | 2,598  | 0      | 9,871  | 4,530  | 102   | 254    |
| Alta.   | 699    | 168    | 1,495  | 823    | 1,545  | 9,779  | 3,543  | 7,722  | 0      | 24,461 | 503   | 1,065  |
| B.C.    | 462    | 148    | 1,500  | 657    | 2,122  | 12,090 | 2,980  | 3,436  | 16,780 | 0      | 928   | 389    |
| Y.T.    | 6      | 5      | 23     | 6      | 37     | 139    | 34     | 91     | 401    | 950    | 0     | 106    |
| N.W.T.  | 132    | 0      | 136    | 57     | 150    | 471    | 237    | 258    | 1,136  | 624    | 101   | 0      |
| IN      | 6,406  | 2,514  | 15,299 | 10,853 | 23,056 | 66,902 | 15,890 | 16,814 | 51,247 | 70,783 | 2,067 | 3,137  |
| OUT     | 13,380 | 2,165  | 18,040 | 11,666 | 32,003 | 69,743 | 19,110 | 20,466 | 51,803 | 41,492 | 1,798 | 3,302  |
| NET     | -6,974 | 349    | -2,741 | -813   | -8,947 | -2,841 | -3,220 | -3,652 | -556   | 29,291 | 269   | -165   |

  

| 1995/96 | N.L.   | P.E.I. | N.S.   | N.B.   | Que.    | Ont.   | Man.   | Sask.  | Alta.  | B.C.   | Y.T.  | N.W.T. |
|---------|--------|--------|--------|--------|---------|--------|--------|--------|--------|--------|-------|--------|
| N.L.    | 0      | 262    | 1,999  | 737    | 297     | 5,643  | 294    | 121    | 2,743  | 1,894  | 99    | 352    |
| P.E.I.  | 151    | 0      | 556    | 359    | 62      | 589    | 21     | 44     | 236    | 205    | 7     | 14     |
| N.S.    | 1,139  | 726    | 0      | 2,487  | 970     | 6,580  | 483    | 238    | 2,275  | 2,392  | 65    | 153    |
| N.B.    | 425    | 498    | 2,328  | 0      | 1,978   | 3,870  | 302    | 153    | 1,371  | 1,110  | 30    | 74     |
| Que.    | 219    | 141    | 1,002  | 2,014  | 0       | 22,702 | 614    | 301    | 2,675  | 5,271  | 68    | 175    |
| Ont.    | 3,222  | 774    | 6,087  | 3,864  | 14,666  | 0      | 4,560  | 2,134  | 12,611 | 23,260 | 214   | 489    |
| Man.    | 112    | 34     | 475    | 285    | 548     | 5,076  | 0      | 2,480  | 4,826  | 4,543  | 62    | 200    |
| Sask.   | 40     | 28     | 264    | 129    | 313     | 2,236  | 2,386  | 0      | 9,808  | 4,067  | 100   | 201    |
| Alta.   | 826    | 187    | 1,488  | 929    | 1,261   | 9,272  | 3,216  | 7,910  | 0      | 22,750 | 564   | 978    |
| B.C.    | 718    | 215    | 1,893  | 862    | 2,277   | 12,423 | 2,920  | 3,631  | 18,763 | 0      | 839   | 393    |
| Y.T.    | 14     | 4      | 25     | 15     | 25      | 163    | 18     | 100    | 402    | 837    | 0     | 36     |
| N.W.T.  | 139    | 13     | 146    | 89     | 159     | 505    | 261    | 299    | 1,327  | 630    | 155   | 0      |
| IN      | 7,005  | 2,882  | 16,263 | 11,770 | 22,556  | 69,059 | 15,075 | 17,411 | 57,037 | 66,959 | 2,203 | 3,065  |
| OUT     | 14,441 | 2,244  | 17,508 | 12,139 | 35,182  | 71,881 | 18,641 | 19,572 | 49,381 | 44,934 | 1,639 | 3,723  |
| NET     | -7,436 | 638    | -1,245 | -369   | -12,626 | -2,822 | -3,566 | -2,161 | 7,656  | 22,025 | 564   | -658   |

## Research on modifications to the method of preliminary estimates of interprovincial migration

Table D3 (cont.)

| 1996/97 | N.L.   | P.E.I. | N.S.   | N.B.   | Que.    | Ont.   | Man.   | Sask.  | Alta.  | B.C.    | Y.T.   | N.W.T. |
|---------|--------|--------|--------|--------|---------|--------|--------|--------|--------|---------|--------|--------|
| N.L.    | 0      | 216    | 1,948  | 645    | 290     | 5,263  | 230    | 220    | 4,452  | 1,414   | 84     | 334    |
| P.E.I.  | 196    | 0      | 612    | 369    | 105     | 643    | 43     | 21     | 381    | 175     | 3      | 10     |
| N.S.    | 1,106  | 673    | 0      | 2,446  | 957     | 6,224  | 447    | 267    | 2,988  | 2,226   | 47     | 145    |
| N.B.    | 489    | 472    | 2,329  | 0      | 1,772   | 3,869  | 269    | 155    | 1,986  | 1,060   | 17     | 75     |
| Que.    | 219    | 113    | 1,017  | 2,156  | 0       | 24,388 | 626    | 279    | 3,944  | 4,949   | 61     | 121    |
| Ont.    | 2,930  | 762    | 5,755  | 3,545  | 12,986  | 0      | 4,444  | 1,979  | 14,303 | 20,601  | 211    | 495    |
| Man.    | 162    | 42     | 438    | 229    | 469     | 4,945  | 0      | 2,834  | 5,796  | 4,563   | 57     | 221    |
| Sask.   | 59     | 20     | 273    | 114    | 267     | 2,124  | 2,101  | 0      | 10,635 | 3,720   | 75     | 177    |
| Alta.   | 643    | 162    | 1,356  | 783    | 1,286   | 9,159  | 2,838  | 7,153  | 0      | 19,341  | 330    | 800    |
| B.C.    | 755    | 202    | 1,941  | 825    | 2,146   | 12,704 | 2,631  | 3,418  | 23,673 | 0       | 850    | 407    |
| Y.T.    | 29     | 8      | 32     | 28     | 36      | 159    | 51     | 85     | 646    | 816     | 0      | 69     |
| N.W.T.  | 174    | 24     | 177    | 90     | 123     | 500    | 203    | 360    | 1,529  | 567     | 170    | 0      |
| IN      | 6,962  | 2,694  | 15,878 | 11,230 | 20,437  | 69,978 | 13,883 | 16,771 | 70,333 | 59,432  | 1,905  | 2,844  |
| OUT     | 15,096 | 2,558  | 17,526 | 12,493 | 37,873  | 68,001 | 19,756 | 19,565 | 44,051 | 49,552  | 1,959  | 3,917  |
| NET     | -8,134 | 136    | -1,648 | -1,263 | -17,436 | 1,977  | -5,873 | -2,794 | 26,282 | 9,880   | -54    | -1,073 |
| 1997/98 | N.L.   | P.E.I. | N.S.   | N.B.   | Que.    | Ont.   | Man.   | Sask.  | Alta.  | B.C.    | Y.T.   | N.W.T. |
| N.L.    | 0      | 243    | 2,012  | 644    | 236     | 5,679  | 266    | 298    | 6,099  | 1,037   | 45     | 323    |
| P.E.I.  | 110    | 0      | 645    | 468    | 106     | 724    | 47     | 53     | 617    | 202     | 2      | 12     |
| N.S.    | 1,176  | 571    | 0      | 2,321  | 781     | 6,850  | 447    | 364    | 4,143  | 1,982   | 46     | 192    |
| N.B.    | 365    | 427    | 2,634  | 0      | 1,859   | 4,403  | 285    | 214    | 2,889  | 908     | 18     | 94     |
| Que.    | 224    | 135    | 984    | 1,875  | 0       | 24,885 | 586    | 344    | 4,027  | 4,225   | 49     | 137    |
| Ont.    | 2,983  | 718    | 5,631  | 3,307  | 12,749  | 0      | 4,608  | 2,067  | 15,679 | 17,606  | 172    | 465    |
| Man.    | 152    | 35     | 414    | 255    | 458     | 5,072  | 0      | 3,081  | 6,651  | 3,847   | 47     | 170    |
| Sask.   | 98     | 35     | 241    | 128    | 268     | 2,153  | 2,286  | 0      | 11,694 | 3,491   | 50     | 193    |
| Alta.   | 1,249  | 203    | 1,627  | 914    | 1,333   | 9,524  | 2,843  | 7,843  | 0      | 16,663  | 262    | 757    |
| B.C.    | 756    | 181    | 1,910  | 877    | 2,573   | 15,150 | 3,245  | 3,991  | 31,789 | 0       | 689    | 362    |
| Y.T.    | 83     | 3      | 38     | 35     | 41      | 227    | 55     | 133    | 850    | 973     | 0      | 88     |
| N.W.T.  | 196    | 19     | 169    | 80     | 109     | 549    | 238    | 309    | 1,869  | 590     | 122    | 0      |
| IN      | 7,392  | 2,570  | 16,304 | 10,904 | 20,513  | 75,216 | 14,906 | 18,697 | 86,307 | 51,524  | 1,502  | 2,823  |
| OUT     | 16,882 | 2,986  | 18,873 | 14,096 | 37,471  | 65,985 | 20,182 | 20,637 | 43,218 | 61,553  | 2,526  | 4,249  |
| NET     | -9,490 | -416   | -2,569 | -3,192 | -16,958 | 9,231  | -5,276 | -1,940 | 43,089 | -10,029 | -1,024 | -1,426 |
| 1998/99 | N.L.   | P.E.I. | N.S.   | N.B.   | Que.    | Ont.   | Man.   | Sask.  | Alta.  | B.C.    | Y.T.   | N.W.T. |
| N.L.    | 0      | 257    | 1,908  | 651    | 174     | 5,481  | 216    | 174    | 3,869  | 674     | 28     | 258    |
| P.E.I.  | 101    | 0      | 588    | 387    | 85      | 665    | 24     | 33     | 360    | 119     | 11     | 13     |
| N.S.    | 1,043  | 561    | 0      | 2,170  | 700     | 6,018  | 416    | 186    | 2,699  | 1,330   | 35     | 170    |
| N.B.    | 318    | 395    | 2,365  | 0      | 1,813   | 3,881  | 224    | 168    | 1,839  | 617     | 22     | 72     |
| Que.    | 216    | 107    | 931    | 1,604  | 0       | 22,691 | 548    | 237    | 2,920  | 3,159   | 43     | 115    |
| Ont.    | 2,899  | 679    | 5,067  | 3,143  | 11,788  | 0      | 3,928  | 1,592  | 12,125 | 14,234  | 165    | 475    |
| Man.    | 130    | 36     | 378    | 184    | 418     | 4,583  | 0      | 2,380  | 4,826  | 2,959   | 51     | 153    |
| Sask.   | 131    | 32     | 275    | 133    | 259     | 2,275  | 2,289  | 0      | 10,895 | 2,976   | 51     | 217    |
| Alta.   | 2,151  | 293    | 2,101  | 1,347  | 1,576   | 10,769 | 3,352  | 6,995  | 0      | 16,033  | 239    | 885    |
| B.C.    | 782    | 197    | 1,708  | 741    | 2,541   | 15,733 | 2,717  | 3,182  | 29,195 | 0       | 581    | 407    |
| Y.T.    | 44     | 13     | 32     | 32     | 41      | 226    | 71     | 75     | 700    | 735     | 0      | 84     |
| N.W.T.  | 180    | 9      | 156    | 78     | 111     | 499    | 200    | 178    | 1,504  | 464     | 80     | 0      |
| IN      | 7,995  | 2,579  | 15,529 | 10,470 | 19,506  | 72,821 | 13,985 | 15,200 | 70,932 | 43,300  | 1,306  | 2,849  |
| OUT     | 13,690 | 2,386  | 15,328 | 11,714 | 32,571  | 56,115 | 16,098 | 19,533 | 45,741 | 57,784  | 2,053  | 3,459  |
| NET     | -5,695 | 193    | 201    | -1,244 | -13,065 | 16,706 | -2,113 | -4,333 | 25,191 | -14,484 | -747   | -610   |

Table D3 (concl.)

| 1999/2000 | N.L.   | P.E.I. | N.S.   | N.B.   | Que.    | Ont.   | Man.   | Sask.  | Alta.  | B.C.    | Y.T.  | N.W.T. |
|-----------|--------|--------|--------|--------|---------|--------|--------|--------|--------|---------|-------|--------|
| N.L.      | 0      | 233    | 1,915  | 663    | 186     | 5,412  | 200    | 137    | 3,102  | 508     | 25    | 282    |
| P.E.I.    | 146    | 0      | 649    | 427    | 85      | 734    | 23     | 30     | 324    | 120     | 10    | 10     |
| N.S.      | 1,159  | 680    | 0      | 2,353  | 937     | 6,791  | 392    | 199    | 2,570  | 1,289   | 13    | 159    |
| N.B.      | 440    | 425    | 2,464  | 0      | 1,952   | 4,401  | 272    | 142    | 1,695  | 599     | 5     | 74     |
| Que.      | 233    | 121    | 865    | 1,806  | 0       | 23,510 | 470    | 272    | 2,763  | 2,856   | 51    | 188    |
| Ont.      | 3,262  | 660    | 5,428  | 3,332  | 12,561  | 0      | 3,965  | 1,510  | 11,490 | 13,770  | 155   | 401    |
| Man.      | 164    | 41     | 432    | 255    | 486     | 5,141  | 0      | 2,335  | 5,362  | 3,100   | 40    | 175    |
| Sask.     | 135    | 61     | 329    | 129    | 259     | 2,678  | 2,450  | 0      | 13,021 | 3,192   | 68    | 181    |
| Alta.     | 1,906  | 254    | 2,164  | 1,426  | 1,703   | 12,415 | 3,200  | 6,911  | 0      | 16,915  | 282   | 871    |
| B.C.      | 734    | 164    | 1,842  | 803    | 2,694   | 17,044 | 2,827  | 2,754  | 28,252 | 0       | 539   | 422    |
| Y.T.      | 32     | 7      | 39     | 14     | 27      | 246    | 64     | 76     | 702    | 696     | 0     | 55     |
| N.W.T.    | 189    | 16     | 145    | 78     | 99      | 531    | 212    | 190    | 1,440  | 420     | 79    | 0      |
| IN        | 8,400  | 2,662  | 16,272 | 11,286 | 20,989  | 78,903 | 14,075 | 14,556 | 70,721 | 43,465  | 1,267 | 2,818  |
| OUT       | 12,663 | 2,558  | 16,542 | 12,469 | 33,135  | 56,534 | 17,531 | 22,503 | 48,047 | 58,075  | 1,958 | 3,399  |
| NET       | -4,263 | 104    | -270   | -1,183 | -12,146 | 22,369 | -3,456 | -7,947 | 22,674 | -14,610 | -691  | -581   |

  

| 2000/01 | N.L.   | P.E.I. | N.S.   | N.B.   | Que.   | Ont.   | Man.   | Sask.  | Alta.  | B.C.   | Y.T.  | N.W.T. |
|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|--------|
| N.L.    | 0      | 208    | 1,817  | 713    | 219    | 5,003  | 194    | 145    | 2,836  | 540    | 7     | 310    |
| P.E.I.  | 96     | 0      | 610    | 331    | 85     | 689    | 51     | 33     | 349    | 133    | 2     | 23     |
| N.S.    | 1,118  | 613    | 0      | 2,438  | 848    | 7,291  | 357    | 322    | 2,745  | 1,402  | 38    | 218    |
| N.B.    | 407    | 385    | 2,350  | 0      | 2,088  | 4,114  | 227    | 125    | 1,583  | 676    | 19    | 95     |
| Que.    | 182    | 110    | 791    | 1,716  | 0      | 22,235 | 432    | 192    | 2,190  | 2,732  | 54    | 149    |
| Ont.    | 3,096  | 673    | 5,439  | 3,195  | 13,113 | 0      | 3,811  | 1,456  | 10,358 | 14,147 | 168   | 437    |
| Man.    | 142    | 40     | 380    | 222    | 479    | 5,180  | 0      | 2,066  | 5,100  | 3,121  | 37    | 179    |
| Sask.   | 100    | 37     | 320    | 127    | 273    | 2,408  | 2,347  | 0      | 12,480 | 3,080  | 57    | 166    |
| Alta.   | 1,593  | 255    | 1,853  | 1,098  | 1,760  | 11,002 | 2,786  | 5,857  | 0      | 16,428 | 260   | 780    |
| B.C.    | 562    | 189    | 1,552  | 615    | 2,295  | 15,930 | 2,204  | 2,565  | 24,859 | 0      | 456   | 397    |
| Y.T.    | 24     | 7      | 39     | 23     | 37     | 152    | 48     | 57     | 543    | 703    | 0     | 92     |
| N.W.T.  | 179    | 50     | 162    | 61     | 144    | 512    | 166    | 167    | 1,086  | 376    | 55    | 0      |
| IN      | 7,499  | 2,567  | 15,313 | 10,539 | 21,341 | 74,516 | 12,623 | 12,985 | 64,129 | 43,338 | 1,153 | 2,846  |
| OUT     | 11,992 | 2,402  | 17,390 | 12,069 | 30,783 | 55,893 | 16,946 | 21,395 | 43,672 | 51,624 | 1,725 | 2,958  |
| NET     | -4,493 | 165    | -2,077 | -1,530 | -9,442 | 18,623 | -4,323 | -8,410 | 20,457 | -8,286 | -572  | -112   |

Table D4: Percentage difference for preliminary modified (PM) and preliminary (P), out-migration, Canada, provinces and territories, 1994/95 to 2000/01 (PM out-migration based on regression)

| 1994/95<br>Prov./terr.<br>(1)          | Out-migration |          |           | Difference  |            | % difference |          |
|----------------------------------------|---------------|----------|-----------|-------------|------------|--------------|----------|
|                                        | P<br>(2)      | F<br>(3) | PM<br>(4) | F-PM<br>(5) | F-P<br>(6) | PM<br>(7)    | P<br>(8) |
| N.L.                                   | 18,867        | 13,380   | 15,755    | -2,375      | -5,487     | -17.75       | -41.01   |
| P.E.I.                                 | 2,623         | 2,165    | 2,190     | -25         | -458       | -1.15        | -21.15   |
| N.S.                                   | 22,700        | 18,040   | 18,955    | -915        | -4,660     | -5.07        | -25.83   |
| N.B.                                   | 16,130        | 11,666   | 13,469    | -1,803      | -4,464     | -15.46       | -38.27   |
| Que.                                   | 43,042        | 32,003   | 35,940    | -3,937      | -11,039    | -12.30       | -34.49   |
| Ont.                                   | 85,609        | 69,743   | 71,485    | -1,742      | -15,866    | -2.50        | -22.75   |
| Man.                                   | 25,448        | 19,110   | 21,249    | -2,139      | -6,338     | -11.19       | -33.17   |
| Sask.                                  | 27,689        | 20,466   | 23,121    | -2,655      | -7,223     | -12.97       | -35.29   |
| Alta.                                  | 66,727        | 51,803   | 55,718    | -3,915      | -14,924    | -7.56        | -28.81   |
| B.C.                                   | 55,130        | 41,492   | 46,035    | -4,543      | -13,638    | -10.95       | -32.87   |
| Y.T.                                   | 2,289         | 1,798    | 1,912     | -114        | -491       | -6.34        | -27.31   |
| N.W.T.                                 | 4,373         | 3,302    | 3,651     | -349        | -1,071     | -10.57       | -32.43   |
| Canada                                 | 370,627       | 284,968  | 309,480   | -24,512     | -85,659    | -8.60        | -30.06   |
| Average absolute percentage difference |               |          |           |             |            | 9.48         | 31.12    |
| sd of absolute percentage difference   |               |          |           |             |            | 5.06         | 6.06     |

  

| 1995/96<br>Prov./terr.<br>(1)          | Out-migration |          |           | Difference  |            | % difference |          |
|----------------------------------------|---------------|----------|-----------|-------------|------------|--------------|----------|
|                                        | P<br>(2)      | F<br>(3) | PM<br>(4) | F-PM<br>(5) | F-P<br>(6) | PM<br>(7)    | P<br>(8) |
| N.L.                                   | 18,238        | 14,441   | 14,578    | -137        | -3,797     | -0.95        | -26.29   |
| P.E.I.                                 | 2,602         | 2,244    | 2,079     | 165         | -358       | 7.35         | -15.95   |
| N.S.                                   | 21,194        | 17,508   | 16,941    | 567         | -3,686     | 3.24         | -21.05   |
| N.B.                                   | 14,835        | 12,139   | 11,858    | 281         | -2,696     | 2.31         | -22.21   |
| Que.                                   | 41,307        | 35,182   | 33,017    | 2,165       | -6,125     | 6.15         | -17.41   |
| Ont.                                   | 89,969        | 71,881   | 71,913    | -32         | -18,088    | -0.04        | -25.16   |
| Man.                                   | 22,757        | 18,641   | 18,190    | 451         | -4,116     | 2.42         | -22.08   |
| Sask.                                  | 24,219        | 19,572   | 19,359    | 213         | -4,647     | 1.09         | -23.74   |
| Alta.                                  | 61,192        | 49,381   | 48,912    | 469         | -11,811    | 0.95         | -23.92   |
| B.C.                                   | 57,681        | 44,934   | 46,105    | -1,171      | -12,747    | -2.61        | -28.37   |
| Y.T.                                   | 2,073         | 1,639    | 1,657     | -18         | -434       | -1.10        | -26.48   |
| N.W.T.                                 | 4,551         | 3,723    | 3,638     | 85          | -828       | 2.28         | -22.24   |
| Canada                                 | 360,618       | 291,285  | 288,247   | 3,038       | -69,333    | 1.04         | -23.80   |
| Average absolute percentage difference |               |          |           |             |            | 2.54         | 22.91    |
| sd of absolute percentage difference   |               |          |           |             |            | 2.18         | 3.62     |

Table D4 (cont.)

| 1996/97<br>Prov./terr.<br>(1)          | Out-migration |         |         | Difference |         | % difference |        |
|----------------------------------------|---------------|---------|---------|------------|---------|--------------|--------|
|                                        | P             | F       | PM      | F-PM       | F-P     | PM           | P      |
|                                        | (2)           | (3)     | (4)     | (5)        | (6)     | (7)          | (8)    |
| N.L.                                   | 20,196        | 15,096  | 15,857  | -761       | -5,100  | -5.04        | -33.78 |
| P.E.I.                                 | 3,333         | 2,558   | 2,708   | -150       | -775    | -5.86        | -30.30 |
| N.S.                                   | 19,846        | 17,526  | 15,583  | 1,943      | -2,320  | 11.09        | -13.24 |
| N.B.                                   | 15,637        | 12,493  | 12,301  | 192        | -3,144  | 1.54         | -25.17 |
| Que.                                   | 44,334        | 37,873  | 34,678  | 3,195      | -6,461  | 8.44         | -17.06 |
| Ont.                                   | 86,704        | 68,001  | 67,716  | 285        | -18,703 | 0.42         | -27.50 |
| Man.                                   | 21,727        | 19,756  | 17,050  | 2,706      | -1,971  | 13.70        | -9.98  |
| Sask.                                  | 23,360        | 19,565  | 18,324  | 1,241      | -3,795  | 6.34         | -19.40 |
| Alta.                                  | 54,065        | 44,051  | 42,265  | 1,786      | -10,014 | 4.05         | -22.73 |
| B.C.                                   | 57,295        | 49,552  | 44,784  | 4,768      | -7,743  | 9.62         | -15.63 |
| Y.T.                                   | 2,464         | 1,959   | 2,029   | -70        | -505    | -3.57        | -25.78 |
| N.W.T.                                 | 4,188         | 3,917   | 3,374   | 543        | -271    | 13.86        | -6.92  |
| Canada                                 | 353,149       | 292,347 | 276,669 | 15,678     | -60,802 | 5.36         | -20.80 |
| Average absolute percentage difference |               |         |         |            |         | 6.96         | 20.62  |
| sd of absolute percentage difference   |               |         |         |            |         | 4.44         | 8.32   |

  

| 1997/98<br>Prov./terr.<br>(1)          | Out-migration |         |         | Difference |         | % difference |        |
|----------------------------------------|---------------|---------|---------|------------|---------|--------------|--------|
|                                        | P             | F       | PM      | F-PM       | F-P     | PM           | P      |
|                                        | (2)           | (3)     | (4)     | (5)        | (6)     | (7)          | (8)    |
| N.L.                                   | 21,251        | 16,882  | 17,192  | -310       | -4,369  | -1.84        | -25.88 |
| P.E.I.                                 | 3,679         | 2,986   | 3,022   | -36        | -693    | -1.21        | -23.21 |
| N.S.                                   | 23,055        | 18,873  | 18,647  | 226        | -4,182  | 1.20         | -22.16 |
| N.B.                                   | 17,259        | 14,096  | 13,974  | 122        | -3,163  | 0.87         | -22.44 |
| Que.                                   | 43,627        | 37,471  | 35,237  | 2,234      | -6,156  | 5.96         | -16.43 |
| Ont.                                   | 79,018        | 65,985  | 63,778  | 2,207      | -13,033 | 3.34         | -19.75 |
| Man.                                   | 23,073        | 20,182  | 18,662  | 1,520      | -2,891  | 7.53         | -14.32 |
| Sask.                                  | 24,571        | 20,637  | 19,869  | 768        | -3,934  | 3.72         | -19.06 |
| Alta.                                  | 50,442        | 43,218  | 40,733  | 2,485      | -7,224  | 5.75         | -16.72 |
| B.C.                                   | 65,602        | 61,553  | 52,959  | 8,594      | -4,049  | 13.96        | -6.58  |
| Y.T.                                   | 2,663         | 2,526   | 2,203   | 323        | -137    | 12.79        | -5.42  |
| N.W.T.                                 | 4,590         | 4,249   | 3,757   | 492        | -341    | 11.58        | -8.03  |
| Canada                                 | 358,830       | 308,658 | 290,033 | 18,625     | -50,172 | 6.03         | -16.25 |
| Average absolute percentage difference |               |         |         |            |         | 5.81         | 16.67  |
| sd of absolute percentage difference   |               |         |         |            |         | 4.72         | 6.84   |

Table D4 (cont.)

| 1998/99<br>Prov./terr.<br>(1)             | Out-migration |          |           | Difference  |            | % difference |          |
|-------------------------------------------|---------------|----------|-----------|-------------|------------|--------------|----------|
|                                           | P<br>(2)      | F<br>(3) | PM<br>(4) | F-PM<br>(5) | F-P<br>(6) | PM<br>(7)    | P<br>(8) |
| N.L.                                      | 16,613        | 13,690   | 13,929    | -239        | -2,923     | -1.75        | -21.35   |
| P.E.I.                                    | 2,816         | 2,386    | 2,361     | 25          | -430       | 1.05         | -18.02   |
| N.S.                                      | 16,776        | 15,328   | 14,065    | 1,263       | -1,448     | 8.24         | -9.45    |
| N.B.                                      | 13,637        | 11,714   | 11,433    | 281         | -1,923     | 2.40         | -16.42   |
| Que.                                      | 39,908        | 32,571   | 33,460    | -889        | -7,337     | -2.73        | -22.53   |
| Ont.                                      | 65,903        | 56,115   | 55,254    | 861         | -9,788     | 1.53         | -17.44   |
| Man.                                      | 19,762        | 16,098   | 16,568    | -470        | -3,664     | -2.92        | -22.76   |
| Sask.                                     | 25,093        | 19,533   | 21,038    | -1,505      | -5,560     | -7.70        | -28.46   |
| Alta.                                     | 54,706        | 45,741   | 45,867    | -126        | -8,965     | -0.28        | -19.60   |
| B.C.                                      | 71,969        | 57,784   | 60,340    | -2,556      | -14,185    | -4.42        | -24.55   |
| Y.T.                                      | 2,878         | 2,053    | 2,413     | -360        | -825       | -17.54       | -40.19   |
| N.W.T.                                    | 3,347         | 3,459    | 2,806     | 653         | 112        | 18.88        | 3.24     |
| Canada                                    | 333,408       | 276,472  | 279,534   | -3,062      | -56,936    | -1.11        | -20.59   |
| Average absolute<br>percentage difference |               |          |           |             |            | 5.79         | 20.33    |
| sd of absolute<br>percentage difference   |               |          |           |             |            | 6.30         | 9.20     |

  

| 1999/2000<br>Prov./terr.<br>(1)           | Out-migration |          |           | Difference  |            | % difference |          |
|-------------------------------------------|---------------|----------|-----------|-------------|------------|--------------|----------|
|                                           | P<br>(2)      | F<br>(3) | PM<br>(4) | F-PM<br>(5) | F-P<br>(6) | PM<br>(7)    | P<br>(8) |
| N.L.                                      | 14,119        | 12,663   | 12,051    | 612         | -1,456     | 4.83         | -11.50   |
| P.E.I.                                    | 2,382         | 2,558    | 2,170     | 388         | 176        | 15.17        | 6.88     |
| N.S.                                      | 17,985        | 16,542   | 15,305    | 1,237       | -1,443     | 7.48         | -8.72    |
| N.B.                                      | 13,585        | 12,469   | 11,602    | 867         | -1,116     | 6.95         | -8.95    |
| Que.                                      | 41,376        | 33,135   | 34,998    | -1,863      | -8,241     | -5.62        | -24.87   |
| Ont.                                      | 71,529        | 56,534   | 60,383    | -3,849      | -14,995    | -6.81        | -26.52   |
| Man.                                      | 20,244        | 17,531   | 17,208    | 323         | -2,713     | 1.84         | -15.48   |
| Sask.                                     | 27,079        | 22,503   | 22,962    | -459        | -4,576     | -2.04        | -20.34   |
| Alta.                                     | 60,892        | 48,047   | 51,428    | -3,381      | -12,845    | -7.04        | -26.73   |
| B.C.                                      | 65,019        | 58,075   | 54,902    | 3,173       | -6,944     | 5.46         | -11.96   |
| Y.T.                                      | 2,321         | 1,958    | 2,119     | -161        | -363       | -8.22        | -18.54   |
| N.W.T.                                    | 2,965         | 3,399    | 2,662     | 737         | 434        | 21.68        | 12.77    |
| Canada                                    | 339,496       | 285,414  | 287,790   | -2,376      | -54,082    | -0.83        | -18.95   |
| average absolute<br>percentage difference |               |          |           |             |            | 7.76         | 16.10    |
| sd of absolute<br>percentage difference   |               |          |           |             |            | 5.54         | 7.15     |

Table D4 (concl.)

| 2000/01<br>Prov./terr.<br>(1)             | Out-migration |          |           | Difference  |            | % difference |          |
|-------------------------------------------|---------------|----------|-----------|-------------|------------|--------------|----------|
|                                           | P<br>(2)      | F<br>(3) | PM<br>(4) | F-PM<br>(5) | F-P<br>(6) | PM<br>(7)    | P<br>(8) |
| N.L.                                      | 14,152        | 11,992   | 12,038    | -46         | -2,160     | -0.38        | -18.01   |
| P.E.I.                                    | 2,816         | 2,402    | 2,395     | 7           | -414       | 0.29         | -17.24   |
| N.S.                                      | 19,156        | 17,390   | 16,294    | 1,096       | -1,766     | 6.30         | -10.16   |
| N.B.                                      | 13,797        | 12,069   | 11,736    | 333         | -1,728     | 2.76         | -14.32   |
| Que.                                      | 36,616        | 30,783   | 31,145    | -362        | -5,833     | -1.18        | -18.95   |
| Ont.                                      | 67,884        | 55,893   | 57,741    | -1,848      | -11,991    | -3.31        | -21.45   |
| Man.                                      | 20,656        | 16,946   | 17,570    | -624        | -3,710     | -3.68        | -21.89   |
| Sask.                                     | 28,950        | 21,395   | 24,625    | -3,230      | -7,555     | -15.10       | -35.31   |
| Alta.                                     | 53,623        | 43,672   | 45,611    | -1,939      | -9,951     | -4.44        | -22.79   |
| B.C.                                      | 62,708        | 51,624   | 53,339    | -1,715      | -11,084    | -3.32        | -21.47   |
| Y.T.                                      | 2,311         | 1,725    | 1,966     | -241        | -586       | -13.97       | -33.97   |
| N.W.T.                                    | 3,907         | 2,958    | 3,322     | -364        | -949       | -12.31       | -32.08   |
| Canada                                    | 326,576       | 268,849  | 277,782   | -8,933      | -57,727    | -3.32        | -21.47   |
| Average absolute<br>percentage difference |               |          |           |             |            | 5.59         | 22.30    |
| sd of absolute<br>percentage difference   |               |          |           |             |            | 5.26         | 7.80     |

Note: PM out-migration is derived from regression using three-year pooling data.

# Research on modifications to the method of preliminary estimates of interprovincial migration

Table D5: Percentatge difference for preliminary modified (PM) and preliminary (P), in-migration, Canada, provinces and territories, 1994/95 to 2000/01 (PM in-migration based on regression)

| 1994/95                                | In-migration |         |         | Difference |         | % difference |        |
|----------------------------------------|--------------|---------|---------|------------|---------|--------------|--------|
| Prov./terr.                            | P            | F       | PM      | F-PM       | F-P     | PM           | P      |
| (1)                                    | (2)          | (3)     | (4)     | (5)        | (6)     | (7)          | (8)    |
| N.L.                                   | 10,457       | 6,406   | 8,731   | -2,325     | -4,051  | -36.29       | -63.24 |
| P.E.I.                                 | 3,498        | 2,514   | 2,922   | -408       | -984    | -16.23       | -39.14 |
| N.S.                                   | 19,883       | 15,299  | 16,602  | -1,303     | -4,584  | -8.52        | -29.96 |
| N.B.                                   | 15,297       | 10,853  | 12,773  | -1,920     | -4,444  | -17.69       | -40.95 |
| Que.                                   | 27,758       | 23,056  | 23,178  | -122       | -4,702  | -0.53        | -20.39 |
| Ont.                                   | 90,211       | 66,902  | 75,329  | -8,427     | -23,309 | -12.60       | -34.84 |
| Man.                                   | 23,286       | 15,890  | 19,444  | -3,554     | -7,396  | -22.37       | -46.54 |
| Sask.                                  | 23,522       | 16,814  | 19,642  | -2,828     | -6,708  | -16.82       | -39.90 |
| Alta.                                  | 62,649       | 51,247  | 52,313  | -1,066     | -11,402 | -2.08        | -22.25 |
| B.C.                                   | 87,542       | 70,783  | 73,099  | -2,316     | -16,759 | -3.27        | -23.68 |
| Y.T.                                   | 2,383        | 2,067   | 1,989   | 78         | -316    | 3.77         | -15.29 |
| N.W.T.                                 | 4,141        | 3,137   | 3,458   | -321       | -1,004  | -10.23       | -32.01 |
| Canada                                 | 370,627      | 284,968 | 309,480 | -24,512    | -85,659 | -8.60        | -30.06 |
| Average absolute percentage difference |              |         |         |            |         | 12.53        | 34.02  |
| sd of absolute percentage difference   |              |         |         |            |         | 10.26        | 13.22  |

  

| 1995/96                                | In-migration |         |         | Difference |         | % difference |        |
|----------------------------------------|--------------|---------|---------|------------|---------|--------------|--------|
| Prov./terr.                            | P            | F       | PM      | F-PM       | F-P     | PM           | P      |
| (1)                                    | (2)          | (3)     | (4)     | (5)        | (6)     | (7)          | (8)    |
| N.L.                                   | 10,665       | 7,005   | 8,525   | -1,520     | -3,660  | -21.70       | -52.25 |
| P.E.I.                                 | 3,482        | 2,882   | 2,784   | 98         | -600    | 3.40         | -20.82 |
| N.S.                                   | 20,301       | 16,263  | 16,227  | 36         | -4,038  | 0.22         | -24.83 |
| N.B.                                   | 14,607       | 11,770  | 11,675  | 95         | -2,837  | 0.81         | -24.10 |
| Que.                                   | 28,090       | 22,556  | 22,452  | 104        | -5,534  | 0.46         | -24.53 |
| Ont.                                   | 84,390       | 69,059  | 67,454  | 1,605      | -15,331 | 2.32         | -22.20 |
| Man.                                   | 20,811       | 15,075  | 16,635  | -1,560     | -5,736  | -10.35       | -38.05 |
| Sask.                                  | 23,476       | 17,411  | 18,765  | -1,354     | -6,065  | -7.78        | -34.83 |
| Alta.                                  | 66,931       | 57,037  | 53,499  | 3,538      | -9,894  | 6.20         | -17.35 |
| B.C.                                   | 81,141       | 66,959  | 64,857  | 2,102      | -14,182 | 3.14         | -21.18 |
| Y.T.                                   | 2,874        | 2,203   | 2,297   | -94        | -671    | -4.27        | -30.46 |
| N.W.T.                                 | 3,850        | 3,065   | 3,077   | -12        | -785    | -0.39        | -25.61 |
| Canada                                 | 360,618      | 291,285 | 288,247 | 3,038      | -69,333 | 1.04         | -23.80 |
| Average absolute percentage difference |              |         |         |            |         | 5.09         | 28.02  |
| sd of absolute percentage difference   |              |         |         |            |         | 6.12         | 9.68   |

Table D5 (cont.)

| 1996/97<br>Prov./terr.<br>(1)             | In-migration |          |           | Difference  |            | % difference |          |
|-------------------------------------------|--------------|----------|-----------|-------------|------------|--------------|----------|
|                                           | P<br>(2)     | F<br>(3) | PM<br>(4) | F-PM<br>(5) | F-P<br>(6) | PM<br>(7)    | P<br>(8) |
| N.L.                                      | 10,911       | 6,962    | 8,548     | -1,586      | -3,949     | -22.78       | -56.72   |
| P.E.I.                                    | 3,277        | 2,694    | 2,567     | 127         | -583       | 4.71         | -21.64   |
| N.S.                                      | 19,703       | 15,878   | 15,436    | 442         | -3,825     | 2.78         | -24.09   |
| N.B.                                      | 13,726       | 11,230   | 10,754    | 476         | -2,496     | 4.24         | -22.23   |
| Que.                                      | 27,709       | 20,437   | 21,708    | -1,271      | -7,272     | -6.22        | -35.58   |
| Ont.                                      | 81,884       | 69,978   | 64,151    | 5,827       | -11,906    | 8.33         | -17.01   |
| Man.                                      | 17,946       | 13,883   | 14,059    | -176        | -4,063     | -1.27        | -29.27   |
| Sask.                                     | 21,774       | 16,771   | 17,059    | -288        | -5,003     | -1.72        | -29.83   |
| Alta.                                     | 78,779       | 70,333   | 61,718    | 8,615       | -8,446     | 12.25        | -12.01   |
| B.C.                                      | 71,582       | 59,432   | 56,080    | 3,352       | -12,150    | 5.64         | -20.44   |
| Y.T.                                      | 2,332        | 1,905    | 1,827     | 78          | -427       | 4.09         | -22.41   |
| N.W.T.                                    | 3,526        | 2,844    | 2,762     | 82          | -682       | 2.88         | -23.98   |
| Canada                                    | 353,149      | 292,347  | 276,669   | 15,678      | -60,802    | 5.36         | -20.80   |
| Average absolute<br>percentage difference |              |          |           |             |            | 6.41         | 26.27    |
| sd of absolute<br>percentage difference   |              |          |           |             |            | 5.98         | 11.37    |

  

| 1997/98<br>Prov./terr.<br>(1)             | In-migration |          |           | Difference  |            | % difference |          |
|-------------------------------------------|--------------|----------|-----------|-------------|------------|--------------|----------|
|                                           | P<br>(2)     | F<br>(3) | PM<br>(4) | F-PM<br>(5) | F-P<br>(6) | PM<br>(7)    | P<br>(8) |
| N.L.                                      | 9,817        | 7,392    | 7,935     | -543        | -2,425     | -7.35        | -32.81   |
| P.E.I.                                    | 2,828        | 2,570    | 2,286     | 284         | -258       | 11.05        | -10.04   |
| N.S.                                      | 18,015       | 16,304   | 14,561    | 1,743       | -1,711     | 10.69        | -10.49   |
| N.B.                                      | 14,203       | 10,904   | 11,480    | -576        | -3,299     | -5.28        | -30.25   |
| Que.                                      | 26,173       | 20,513   | 21,155    | -642        | -5,660     | -3.13        | -27.59   |
| Ont.                                      | 85,680       | 75,216   | 69,253    | 5,963       | -10,464    | 7.93         | -13.91   |
| Man.                                      | 17,690       | 14,906   | 14,299    | 607         | -2,784     | 4.07         | -18.68   |
| Sask.                                     | 21,204       | 18,697   | 17,139    | 1,558       | -2,507     | 8.33         | -13.41   |
| Alta.                                     | 97,229       | 86,307   | 78,587    | 7,720       | -10,922    | 8.94         | -12.65   |
| B.C.                                      | 61,372       | 51,524   | 49,605    | 1,919       | -9,848     | 3.72         | -19.11   |
| Y.T.                                      | 1,734        | 1,502    | 1,401     | 101         | -232       | 6.72         | -15.45   |
| N.W.T.                                    | 2,885        | 2,823    | 2,332     | 491         | -62        | 17.39        | -2.20    |
| Canada                                    | 358,830      | 308,658  | 290,033   | 18,625      | -50,172    | 6.03         | -16.25   |
| Average absolute<br>percentage difference |              |          |           |             |            | 7.88         | 17.22    |
| sd of absolute<br>percentage difference   |              |          |           |             |            | 3.96         | 9.04     |

Table D5 (cont.)

| 1998/99                                |              |          |           |             |            |              |          |
|----------------------------------------|--------------|----------|-----------|-------------|------------|--------------|----------|
| Prov./terr.<br>(1)                     | In-migration |          |           | Difference  |            | % difference |          |
|                                        | P<br>(2)     | F<br>(3) | PM<br>(4) | F-PM<br>(5) | F-P<br>(6) | PM<br>(7)    | P<br>(8) |
| N.L.                                   | 10,988       | 7,995    | 9,213     | -1,218      | -2,993     | -15.23       | -37.44   |
| P.E.I.                                 | 2,982        | 2,579    | 2,500     | 79          | -403       | 3.06         | -15.63   |
| N.S.                                   | 17,035       | 15,529   | 14,283    | 1,246       | -1,506     | 8.02         | -9.70    |
| N.B.                                   | 12,706       | 10,470   | 10,653    | -183        | -2,236     | -1.75        | -21.36   |
| Que.                                   | 24,226       | 19,506   | 20,311    | -805        | -4,720     | -4.13        | -24.20   |
| Ont.                                   | 82,865       | 72,821   | 69,476    | 3,345       | -10,044    | 4.59         | -13.79   |
| Man.                                   | 18,430       | 13,985   | 15,452    | -1,467      | -4,445     | -10.49       | -31.78   |
| Sask.                                  | 22,533       | 15,200   | 18,892    | -3,692      | -7,333     | -24.29       | -48.24   |
| Alta.                                  | 85,770       | 70,932   | 71,911    | -979        | -14,838    | -1.38        | -20.92   |
| B.C.                                   | 50,866       | 43,300   | 42,646    | 654         | -7,566     | 1.51         | -17.47   |
| Y.T.                                   | 1,606        | 1,306    | 1,346     | -40         | -300       | -3.06        | -22.97   |
| N.W.T.                                 | 3,401        | 2,849    | 2,851     | -2          | -552       | -0.07        | -19.38   |
| Canada                                 | 333,408      | 276,472  | 279,534   | -3,062      | -56,936    | -1.11        | -20.59   |
| Average absolute percentage difference |              |          |           |             |            | 6.47         | 23.57    |
| sd of absolute percentage difference   |              |          |           |             |            | 7.13         | 10.82    |

  

| 1999/2000                              |              |          |           |             |            |              |          |
|----------------------------------------|--------------|----------|-----------|-------------|------------|--------------|----------|
| Prov./terr.<br>(1)                     | In-migration |          |           | Difference  |            | % difference |          |
|                                        | P<br>(2)     | F<br>(3) | PM<br>(4) | F-PM<br>(5) | F-P<br>(6) | PM<br>(7)    | P<br>(8) |
| N.L.                                   | 11,609       | 8,400    | 9,841     | -1,441      | -3,209     | -17.15       | -38.20   |
| P.E.I.                                 | 3,361        | 2,662    | 2,849     | -187        | -699       | -7.02        | -26.26   |
| N.S.                                   | 18,650       | 16,272   | 15,810    | 462         | -2,378     | 2.84         | -14.61   |
| N.B.                                   | 14,109       | 11,286   | 11,960    | -674        | -2,823     | -5.97        | -25.01   |
| Que.                                   | 25,033       | 20,989   | 21,220    | -231        | -4,044     | -1.10        | -19.27   |
| Ont.                                   | 91,347       | 78,903   | 77,435    | 1,468       | -12,444    | 1.86         | -15.77   |
| Man.                                   | 18,954       | 14,075   | 16,067    | -1,992      | -4,879     | -14.15       | -34.66   |
| Sask.                                  | 20,781       | 14,556   | 17,616    | -3,060      | -6,225     | -21.02       | -42.77   |
| Alta.                                  | 72,685       | 70,721   | 61,615    | 9,106       | -1,964     | 12.88        | -2.78    |
| B.C.                                   | 57,866       | 43,465   | 49,053    | -5,588      | -14,401    | -12.86       | -33.13   |
| Y.T.                                   | 1,679        | 1,267    | 1,423     | -156        | -412       | -12.31       | -32.52   |
| N.W.T.                                 | 3,422        | 2,818    | 2,901     | -83         | -604       | -2.95        | -21.43   |
| Canada                                 | 339,496      | 285,414  | 287,790   | -2,376      | -54,082    | -0.83        | -18.95   |
| Average absolute percentage difference |              |          |           |             |            | 9.34         | 25.53    |
| sd of absolute percentage difference   |              |          |           |             |            | 6.59         | 11.43    |

Table D5 (concl.)

| 2000/01<br>Prov./terr.<br>(1)             | In-migration |          |           | Difference  |            | % difference |          |
|-------------------------------------------|--------------|----------|-----------|-------------|------------|--------------|----------|
|                                           | P<br>(2)     | F<br>(3) | PM<br>(4) | F-PM<br>(5) | F-P<br>(6) | PM<br>(7)    | P<br>(8) |
| N.L.                                      | 10,611       | 7,499    | 9,026     | -1,527      | -3,112     | -20.36       | -41.50   |
| P.E.I.                                    | 2,887        | 2,567    | 2,456     | 111         | -320       | 4.32         | -12.47   |
| N.S.                                      | 18,332       | 15,313   | 15,592    | -279        | -3,019     | -1.82        | -19.72   |
| N.B.                                      | 13,716       | 10,539   | 11,667    | -1,128      | -3,177     | -10.70       | -30.15   |
| Que.                                      | 24,834       | 21,341   | 21,124    | 217         | -3,493     | 1.02         | -16.37   |
| Ont.                                      | 85,761       | 74,516   | 72,947    | 1,569       | -11,245    | 2.11         | -15.09   |
| Man.                                      | 17,562       | 12,623   | 14,938    | -2,315      | -4,939     | -18.34       | -39.13   |
| Sask.                                     | 18,497       | 12,985   | 15,733    | -2,748      | -5,512     | -21.16       | -42.45   |
| Alta.                                     | 79,371       | 64,129   | 67,512    | -3,383      | -15,242    | -5.28        | -23.77   |
| B.C.                                      | 50,019       | 43,338   | 42,546    | 792         | -6,681     | 1.83         | -15.42   |
| Y.T.                                      | 1,465        | 1,153    | 1,246     | -93         | -312       | -8.07        | -27.06   |
| N.W.T.                                    | 3,521        | 2,846    | 2,995     | -149        | -675       | -5.24        | -23.72   |
| Canada                                    | 326,576      | 268,849  | 277,782   | -8,933      | -57,727    | -3.32        | -21.47   |
| Average absolute<br>percentage difference |              |          |           |             |            | 8.35         | 25.57    |
| sd of absolute<br>percentage difference   |              |          |           |             |            | 7.55         | 10.68    |

Note: PM in-migration is derived from regression using three-year pooling data.

Table D6: Preliminary modified (PM) interprovincial migration matrix, 1993/94 to 2000/01, based on origin-constrained model to redistribute PM out-migration

| 1994/95 | N.L.   | P.E.I. | N.S.   | N.B.   | Que.    | Ont.   | Man.   | Sask.  | Alta.  | B.C.   | Y.T.  | N.W.T. |
|---------|--------|--------|--------|--------|---------|--------|--------|--------|--------|--------|-------|--------|
| N.L.    | 0      | 292    | 2,701  | 814    | 441     | 6,638  | 269    | 137    | 1,831  | 2,201  | 56    | 374    |
| P.E.I.  | 99     | 0      | 519    | 352    | 98      | 614    | 23     | 48     | 199    | 234    | 1     | 3      |
| N.S.    | 1,291  | 705    | 0      | 2,696  | 1,041   | 6,929  | 536    | 256    | 1,917  | 3,339  | 28    | 216    |
| N.B.    | 436    | 482    | 2,826  | 0      | 2,237   | 4,254  | 338    | 161    | 1,307  | 1,318  | 12    | 98     |
| Que.    | 346    | 145    | 1,098  | 2,114  | 0       | 23,236 | 577    | 285    | 2,096  | 5,851  | 56    | 136    |
| Ont.    | 2,969  | 847    | 5,547  | 3,355  | 15,279  | 0      | 4,458  | 2,302  | 11,516 | 24,467 | 158   | 568    |
| Man.    | 170    | 39     | 453    | 365    | 619     | 5,288  | 0      | 2,763  | 4,933  | 6,321  | 55    | 244    |
| Sask.   | 90     | 49     | 271    | 105    | 349     | 2,234  | 2,655  | 0      | 11,322 | 5,666  | 97    | 283    |
| Alta.   | 753    | 183    | 1,383  | 775    | 1,596   | 10,129 | 3,625  | 8,110  | 0      | 27,679 | 368   | 1,117  |
| B.C.    | 484    | 165    | 1,748  | 793    | 2,436   | 12,957 | 3,296  | 3,511  | 19,404 | 0      | 783   | 450    |
| Y.T.    | 44     | 4      | 34     | 16     | 20      | 114    | 56     | 86     | 440    | 1,035  | 0     | 64     |
| N.W.T.  | 115    | 20     | 148    | 105    | 199     | 481    | 270    | 266    | 1,252  | 675    | 121   | 0      |
| IN      | 6,817  | 2,931  | 16,728 | 11,490 | 24,315  | 72,874 | 16,103 | 17,932 | 56,217 | 78,786 | 1,735 | 3,553  |
| OUT     | 15,754 | 2,190  | 18,954 | 13,469 | 35,940  | 71,486 | 21,250 | 23,121 | 55,718 | 46,034 | 1,913 | 3,652  |
| NET     | -8,937 | 741    | -2,226 | -1,979 | -11,625 | 1,388  | -5,147 | -5,189 | 499    | 32,752 | -178  | -99    |

  

| 1995/96 | N.L.   | P.E.I. | N.S.   | N.B.   | Que.   | Ont.   | Man.   | Sask.  | Alta.  | B.C.   | Y.T.  | N.W.T. |
|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|--------|
| N.L.    | 0      | 236    | 2,047  | 684    | 288    | 6,259  | 297    | 108    | 2,144  | 2,162  | 64    | 307    |
| P.E.I.  | 77     | 0      | 496    | 339    | 63     | 602    | 35     | 33     | 219    | 199    | 3     | 13     |
| N.S.    | 1,182  | 604    | 0      | 2,359  | 924    | 6,052  | 526    | 263    | 2,042  | 2,784  | 53    | 151    |
| N.B.    | 387    | 397    | 2,322  | 0      | 2,040  | 3,734  | 327    | 143    | 1,211  | 1,192  | 18    | 85     |
| Que.    | 315    | 104    | 1,039  | 1,938  | 0      | 21,318 | 624    | 322    | 1,845  | 5,332  | 40    | 141    |
| Ont.    | 2,970  | 790    | 5,935  | 3,603  | 15,504 | 0      | 4,848  | 2,019  | 11,293 | 24,262 | 224   | 466    |
| Man.    | 114    | 24     | 434    | 269    | 553    | 4,740  | 0      | 2,363  | 4,528  | 4,941  | 39    | 184    |
| Sask.   | 78     | 47     | 233    | 153    | 267    | 2,165  | 2,457  | 0      | 9,337  | 4,285  | 96    | 240    |
| Alta.   | 660    | 159    | 1,412  | 777    | 1,459  | 9,233  | 3,345  | 7,291  | 0      | 23,096 | 475   | 1,006  |
| B.C.    | 513    | 164    | 1,667  | 730    | 2,358  | 13,434 | 3,311  | 3,818  | 18,646 | 0      | 1,031 | 432    |
| Y.T.    | 6      | 5      | 21     | 6      | 34     | 128    | 31     | 84     | 370    | 876    | 0     | 98     |
| N.W.T.  | 145    | 0      | 150    | 63     | 165    | 519    | 261    | 284    | 1,252  | 687    | 111   | 0      |
| IN      | 6,447  | 2,530  | 15,756 | 10,921 | 23,635 | 68,184 | 16,062 | 16,728 | 52,887 | 69,816 | 2,154 | 3,123  |
| OUT     | 14,576 | 2,079  | 16,940 | 11,856 | 33,018 | 71,914 | 18,189 | 19,358 | 48,913 | 46,104 | 1,659 | 3,637  |
| NET     | -8,129 | 451    | -1,184 | -935   | -9,383 | -3,730 | -2,127 | -2,630 | 3,974  | 23,712 | 495   | -514   |

  

| 1996/97 | N.L.   | P.E.I. | N.S.   | N.B.   | Que.    | Ont.   | Man.   | Sask.  | Alta.  | B.C.   | Y.T.  | N.W.T. |
|---------|--------|--------|--------|--------|---------|--------|--------|--------|--------|--------|-------|--------|
| N.L.    | 0      | 288    | 2,195  | 809    | 326     | 6,196  | 323    | 133    | 3,012  | 2,080  | 109   | 387    |
| P.E.I.  | 182    | 0      | 671    | 433    | 75      | 711    | 25     | 53     | 285    | 247    | 8     | 17     |
| N.S.    | 1,014  | 646    | 0      | 2,214  | 863     | 5,857  | 430    | 212    | 2,025  | 2,129  | 58    | 136    |
| N.B.    | 431    | 505    | 2,359  | 0      | 2,004   | 3,922  | 306    | 155    | 1,389  | 1,125  | 30    | 75     |
| Que.    | 216    | 139    | 988    | 1,985  | 0       | 22,377 | 605    | 297    | 2,637  | 5,195  | 67    | 172    |
| Ont.    | 3,035  | 729    | 5,734  | 3,640  | 13,816  | 0      | 4,296  | 2,010  | 11,880 | 21,912 | 202   | 461    |
| Man.    | 102    | 31     | 434    | 261    | 501     | 4,643  | 0      | 2,268  | 4,414  | 4,155  | 57    | 183    |
| Sask.   | 37     | 26     | 247    | 121    | 293     | 2,093  | 2,234  | 0      | 9,183  | 3,808  | 94    | 188    |
| Alta.   | 707    | 160    | 1,274  | 795    | 1,079   | 7,936  | 2,753  | 6,770  | 0      | 19,472 | 483   | 837    |
| B.C.    | 716    | 214    | 1,887  | 859    | 2,269   | 12,382 | 2,910  | 3,619  | 18,700 | 0      | 836   | 392    |
| Y.T.    | 17     | 5      | 31     | 19     | 31      | 202    | 22     | 124    | 498    | 1,036  | 0     | 45     |
| N.W.T.  | 126    | 12     | 132    | 81     | 144     | 458    | 237    | 271    | 1,203  | 571    | 140   | 0      |
| IN      | 6,583  | 2,755  | 15,952 | 11,217 | 21,401  | 66,777 | 14,141 | 15,912 | 55,226 | 61,730 | 2,084 | 2,893  |
| OUT     | 15,858 | 2,707  | 15,584 | 12,301 | 34,678  | 67,715 | 17,049 | 18,324 | 42,266 | 44,764 | 2,030 | 3,375  |
| NET     | -9,275 | 48     | 368    | -1,084 | -13,277 | -938   | -2,908 | -2,412 | 12,960 | 16,946 | 54    | -482   |

Research on modifications to the method of preliminary estimates of interprovincial migration

Table D6 (cont.)

| 1997/98 | N.L.    | P.E.I. | N.S.   | N.B.   | Que.    | Ont.   | Man.   | Sask.  | Alta.  | B.C.   | Y.T.  | N.W.T. |
|---------|---------|--------|--------|--------|---------|--------|--------|--------|--------|--------|-------|--------|
| N.L.    | 0       | 246    | 2,218  | 735    | 330     | 5,994  | 262    | 251    | 5,070  | 1,610  | 96    | 380    |
| P.E.I.  | 232     | 0      | 723    | 436    | 124     | 760    | 51     | 25     | 450    | 207    | 4     | 12     |
| N.S.    | 1,177   | 716    | 0      | 2,602  | 1,018   | 6,622  | 476    | 284    | 3,179  | 2,368  | 50    | 154    |
| N.B.    | 547     | 528    | 2,605  | 0      | 1,982   | 4,328  | 301    | 173    | 2,221  | 1,186  | 19    | 84     |
| Que.    | 204     | 105    | 946    | 2,006  | 0       | 22,691 | 582    | 260    | 3,669  | 4,605  | 57    | 113    |
| Ont.    | 2,748   | 715    | 5,398  | 3,325  | 12,180  | 0      | 4,168  | 1,856  | 13,415 | 19,322 | 198   | 455    |
| Man.    | 153     | 40     | 414    | 216    | 443     | 4,671  | 0      | 2,677  | 5,475  | 4,310  | 54    | 209    |
| Sask.   | 60      | 20     | 277    | 116    | 271     | 2,157  | 2,134  | 0      | 10,800 | 3,778  | 76    | 180    |
| Alta.   | 780     | 190    | 1,254  | 724    | 1,189   | 8,469  | 2,624  | 6,614  | 0      | 17,884 | 305   | 740    |
| B.C.    | 807     | 216    | 2,074  | 882    | 2,294   | 13,577 | 2,812  | 3,653  | 25,301 | 0      | 908   | 435    |
| Y.T.    | 33      | 9      | 36     | 31     | 40      | 179    | 57     | 96     | 726    | 918    | 0     | 78     |
| N.W.T.  | 167     | 23     | 170    | 86     | 118     | 480    | 195    | 345    | 1,467  | 544    | 163   | 0      |
| IN      | 6,908   | 2,768  | 16,115 | 11,159 | 19,989  | 69,928 | 13,662 | 16,234 | 71,773 | 56,732 | 1,930 | 2,840  |
| OUT     | 17,192  | 3,024  | 18,646 | 13,974 | 35,238  | 63,780 | 18,662 | 19,869 | 40,733 | 52,959 | 2,203 | 3,758  |
| NET     | -10,284 | -256   | -2,531 | -2,815 | -15,249 | 6,148  | -5,000 | -3,635 | 31,040 | 3,773  | -273  | -918   |

  

| 1998/99 | N.L.   | P.E.I. | N.S.   | N.B.   | Que.    | Ont.   | Man.   | Sask.  | Alta.  | B.C.    | Y.T.   | N.W.T. |
|---------|--------|--------|--------|--------|---------|--------|--------|--------|--------|---------|--------|--------|
| N.L.    | 0      | 200    | 1,660  | 531    | 195     | 4,686  | 219    | 246    | 5,032  | 856     | 37     | 267    |
| P.E.I.  | 87     | 0      | 510    | 370    | 84      | 572    | 37     | 42     | 488    | 160     | 2      | 9      |
| N.S.    | 876    | 426    | 0      | 1,730  | 582     | 5,105  | 333    | 271    | 3,088  | 1,477   | 34     | 143    |
| N.B.    | 296    | 346    | 2,136  | 0      | 1,508   | 3,571  | 231    | 174    | 2,343  | 736     | 15     | 76     |
| Que.    | 200    | 121    | 879    | 1,674  | 0       | 22,221 | 523    | 307    | 3,596  | 3,773   | 44     | 122    |
| Ont.    | 2,498  | 601    | 4,715  | 2,789  | 10,676  | 0      | 3,859  | 1,731  | 13,129 | 14,743  | 144    | 389    |
| Man.    | 125    | 29     | 340    | 209    | 376     | 4,164  | 0      | 2,529  | 5,460  | 3,158   | 39     | 140    |
| Sask.   | 100    | 36     | 246    | 130    | 273     | 2,195  | 2,330  | 0      | 11,921 | 3,559   | 51     | 197    |
| Alta.   | 1,326  | 215    | 1,727  | 970    | 1,415   | 10,108 | 3,017  | 8,324  | 0      | 17,684  | 278    | 803    |
| B.C.    | 741    | 177    | 1,872  | 860    | 2,522   | 14,851 | 3,181  | 3,912  | 31,163 | 0       | 675    | 384    |
| Y.T.    | 79     | 3      | 36     | 33     | 39      | 217    | 53     | 127    | 812    | 929     | 0      | 84     |
| N.W.T.  | 129    | 13     | 111    | 53     | 72      | 363    | 157    | 204    | 1,234  | 390     | 81     | 0      |
| IN      | 6,457  | 2,167  | 14,232 | 9,329  | 17,742  | 68,053 | 13,940 | 17,867 | 78,266 | 47,465  | 1,400  | 2,614  |
| OUT     | 13,929 | 2,361  | 14,085 | 11,432 | 33,460  | 55,254 | 16,569 | 21,038 | 45,867 | 60,338  | 2,412  | 2,807  |
| NET     | -7,472 | -194   | 167    | -2,103 | -15,718 | 12,799 | -2,629 | -3,171 | 32,399 | -12,873 | -1,012 | -193   |

  

| 1999/2000 | N.L.   | P.E.I. | N.S.   | N.B.   | Que.    | Ont.   | Man.   | Sask.  | Alta.  | B.C.   | Y.T.  | N.W.T. |
|-----------|--------|--------|--------|--------|---------|--------|--------|--------|--------|--------|-------|--------|
| N.L.      | 0      | 226    | 1,680  | 573    | 153     | 4,825  | 190    | 153    | 3,406  | 593    | 25    | 227    |
| P.E.I.    | 92     | 0      | 535    | 352    | 77      | 605    | 22     | 30     | 327    | 108    | 10    | 12     |
| N.S.      | 1,041  | 560    | 0      | 2,167  | 699     | 6,009  | 415    | 186    | 2,695  | 1,328  | 35    | 170    |
| N.B.      | 315    | 391    | 2,342  | 0      | 1,796   | 3,844  | 222    | 166    | 1,821  | 611    | 22    | 71     |
| Que.      | 232    | 115    | 1,000  | 1,724  | 0       | 24,382 | 589    | 255    | 3,138  | 3,394  | 46    | 124    |
| Ont.      | 3,119  | 731    | 5,474  | 3,382  | 12,685  | 0      | 4,227  | 1,713  | 13,047 | 15,317 | 178   | 511    |
| Man.      | 139    | 38     | 404    | 197    | 447     | 4,899  | 0      | 2,544  | 5,159  | 3,163  | 55    | 164    |
| Sask.     | 154    | 39     | 323    | 156    | 304     | 2,674  | 2,691  | 0      | 12,808 | 3,498  | 60    | 255    |
| Alta.     | 2,418  | 329    | 2,362  | 1,514  | 1,772   | 12,108 | 3,769  | 7,865  | 0      | 18,026 | 269   | 995    |
| B.C.      | 743    | 187    | 1,623  | 704    | 2,414   | 14,948 | 2,581  | 3,023  | 27,739 | 0      | 552   | 387    |
| Y.T.      | 45     | 13     | 33     | 33     | 42      | 233    | 73     | 77     | 723    | 759    | 0     | 87     |
| N.W.T.    | 139    | 7      | 120    | 60     | 85      | 384    | 154    | 137    | 1,157  | 357    | 62    | 0      |
| IN        | 8,437  | 2,635  | 15,896 | 10,862 | 20,474  | 74,911 | 14,933 | 16,149 | 72,020 | 47,154 | 1,314 | 3,003  |
| OUT       | 12,051 | 2,170  | 15,305 | 11,601 | 34,999  | 60,384 | 17,209 | 22,961 | 51,427 | 54,901 | 2,118 | 2,662  |
| NET       | -3,614 | -465   | 591    | -739   | -14,525 | 14,527 | -2,276 | -6,812 | 20,593 | -7,747 | -804  | 341    |

Table D6 (concl.)

| 2000/01 | N.L.   | P.E.I. | N.S.   | N.B.   | Que.    | Ont.   | Man.   | Sask.   | Alta.  | B.C.    | Y.T.  | N.W.T. |
|---------|--------|--------|--------|--------|---------|--------|--------|---------|--------|---------|-------|--------|
| N.L.    | 0      | 221    | 1,820  | 630    | 177     | 5,145  | 190    | 130     | 2,949  | 483     | 24    | 268    |
| P.E.I.  | 137    | 0      | 608    | 400    | 80      | 687    | 22     | 28      | 303    | 112     | 9     | 9      |
| N.S.    | 1,142  | 670    | 0      | 2,318  | 923     | 6,689  | 386    | 196     | 2,531  | 1,270   | 13    | 157    |
| N.B.    | 414    | 400    | 2,319  | 0      | 1,837   | 4,142  | 256    | 134     | 1,595  | 564     | 5     | 70     |
| Que.    | 219    | 114    | 813    | 1,698  | 0       | 22,098 | 442    | 256     | 2,597  | 2,684   | 48    | 177    |
| Ont.    | 3,332  | 674    | 5,544  | 3,403  | 12,829  | 0      | 4,050  | 1,542   | 11,735 | 14,064  | 158   | 410    |
| Man.    | 164    | 41     | 433    | 256    | 487     | 5,152  | 0      | 2,340   | 5,374  | 3,107   | 40    | 175    |
| Sask.   | 148    | 67     | 360    | 141    | 283     | 2,931  | 2,681  | 0       | 14,249 | 3,493   | 74    | 198    |
| Alta.   | 1,809  | 241    | 2,054  | 1,354  | 1,617   | 11,786 | 3,038  | 6,561   | 0      | 16,057  | 268   | 827    |
| B.C.    | 674    | 151    | 1,692  | 738    | 2,474   | 15,654 | 2,596  | 2,529   | 25,948 | 0       | 495   | 388    |
| Y.T.    | 32     | 7      | 39     | 14     | 27      | 247    | 64     | 76      | 705    | 699     | 0     | 55     |
| N.W.T.  | 185    | 16     | 142    | 76     | 97      | 519    | 207    | 186     | 1,407  | 410     | 77    | 0      |
| IN      | 8,256  | 2,602  | 15,824 | 11,028 | 20,831  | 75,050 | 13,932 | 13,978  | 69,393 | 42,943  | 1,211 | 2,734  |
| OUT     | 12,037 | 2,395  | 16,295 | 11,736 | 31,146  | 57,741 | 17,569 | 24,625  | 45,612 | 53,339  | 1,965 | 3,322  |
| NET     | -3,781 | 207    | -471   | -708   | -10,315 | 17,309 | -3,637 | -10,647 | 23,781 | -10,396 | -754  | -588   |

Note: these PM migration matrices are estimated based on the origin-constrained model to redistribute PM out-migration.

**Table D7: Preliminary modified in-migration derived from PM out-migration and PM net migration (in = out + net), 1994/95 to 2000/01**

| 1994/95<br>Prov./terr.<br>(1) | Preliminary modified migration |            |                   |
|-------------------------------|--------------------------------|------------|-------------------|
|                               | Out<br>(2)                     | Net<br>(3) | In<br>(4)=(2)+(3) |
| N.L.                          | 15,755                         | -7,893     | 7,862             |
| P.E.I.                        | 2,190                          | 821        | 3,011             |
| N.S.                          | 18,955                         | -2,644     | 16,311            |
| N.B.                          | 13,469                         | -782       | 12,687            |
| Que.                          | 35,940                         | -14,345    | 21,595            |
| Ont.                          | 71,485                         | 4,319      | 75,804            |
| Man.                          | 21,249                         | -2,029     | 19,220            |
| Sask.                         | 23,121                         | -3,911     | 19,210            |
| Alta.                         | 55,718                         | -3,827     | 51,891            |
| B.C.                          | 46,035                         | 30,421     | 76,456            |
| Y.T.                          | 1,912                          | 88         | 2,000             |
| N.W.T.                        | 3,651                          | -218       | 3,433             |
| Canada                        | 309,480                        | 0          | 309,480           |

  

| 1995/96<br>Prov./terr.<br>(1) | Preliminary modified migration |            |                   |
|-------------------------------|--------------------------------|------------|-------------------|
|                               | Out<br>(2)                     | Net<br>(3) | In<br>(4)=(2)+(3) |
| N.L.                          | 14,578                         | -6,720     | 7,858             |
| P.E.I.                        | 2,079                          | 781        | 2,860             |
| N.S.                          | 16,941                         | -792       | 16,149            |
| N.B.                          | 11,858                         | -202       | 11,656            |
| Que.                          | 33,017                         | -11,728    | 21,289            |
| Ont.                          | 71,913                         | -4,950     | 66,963            |
| Man.                          | 18,190                         | -1,727     | 16,463            |
| Sask.                         | 19,359                         | -659       | 18,700            |
| Alta.                         | 48,912                         | 5,092      | 54,004            |
| B.C.                          | 46,105                         | 20,817     | 66,922            |
| Y.T.                          | 1,657                          | 711        | 2,368             |
| N.W.T.                        | 3,638                          | -622       | 3,016             |
| Canada                        | 288,247                        | 0          | 288,247           |

  

| 1996/97<br>Prov./terr.<br>(1) | Preliminary modified migration |            |                   |
|-------------------------------|--------------------------------|------------|-------------------|
|                               | Out<br>(2)                     | Net<br>(3) | In<br>(4)=(2)+(3) |
| N.L.                          | 15,857                         | -8,161     | 7,696             |
| P.E.I.                        | 2,708                          | -49        | 2,659             |
| N.S.                          | 15,583                         | -126       | 15,457            |
| N.B.                          | 12,301                         | -1,680     | 10,621            |
| Que.                          | 34,678                         | -14,613    | 20,065            |
| Ont.                          | 67,716                         | -4,237     | 63,479            |
| Man.                          | 17,050                         | -3,323     | 13,727            |
| Sask.                         | 18,324                         | -1,394     | 16,930            |
| Alta.                         | 42,265                         | 21,723     | 63,988            |
| B.C.                          | 44,784                         | 12,558     | 57,342            |
| Y.T.                          | 2,029                          | -116       | 1,913             |
| N.W.T.                        | 3,374                          | -582       | 2,792             |
| Canada                        | 276,669                        | 0          | 276,669           |

Table D7 (cont.)

| 1997/98     | Preliminary modified migration |         |             |
|-------------|--------------------------------|---------|-------------|
| Prov./terr. | Out                            | Net     | In          |
| (1)         | (2)                            | (3)     | (4)=(2)+(3) |
| N.L.        | 17,192                         | -10,300 | 6,892       |
| P.E.I.      | 3,022                          | -767    | 2,255       |
| N.S.        | 18,647                         | -4,540  | 14,107      |
| N.B.        | 13,974                         | -2,753  | 11,221      |
| Que.        | 35,237                         | -15,723 | 19,514      |
| Ont.        | 63,778                         | 6,001   | 69,779      |
| Man.        | 18,662                         | -4,849  | 13,813      |
| Sask.       | 19,869                         | -3,033  | 16,836      |
| Alta.       | 40,733                         | 42,146  | 82,879      |
| B.C.        | 52,959                         | -3,810  | 49,149      |
| Y.T.        | 2,203                          | -837    | 1,366       |
| N.W.T.      | 3,757                          | -1,536  | 2,221       |
| Canada      | 290,033                        | 0       | 290,033     |

  

| 1998/99     | Preliminary modified migration |         |             |
|-------------|--------------------------------|---------|-------------|
| Prov./terr. | Out                            | Net     | In          |
| (1)         | (2)                            | (3)     | (4)=(2)+(3) |
| N.L.        | 13,929                         | -5,313  | 8,616       |
| P.E.I.      | 2,361                          | 157     | 2,518       |
| N.S.        | 14,065                         | 245     | 14,310      |
| N.B.        | 11,433                         | -879    | 10,554      |
| Que.        | 33,460                         | -14,813 | 18,647      |
| Ont.        | 55,254                         | 16,022  | 71,276      |
| Man.        | 16,568                         | -1,258  | 15,310      |
| Sask.       | 21,038                         | -2,418  | 18,620      |
| Alta.       | 45,867                         | 29,342  | 75,209      |
| B.C.        | 60,340                         | -19,933 | 40,407      |
| Y.T.        | 2,413                          | -1,202  | 1,211       |
| N.W.T.      | 2,806                          | 51      | 2,857       |
| Canada      | 279,534                        | 0       | 279,534     |

  

| 1999/2000   | Preliminary modified migration |         |             |
|-------------|--------------------------------|---------|-------------|
| Prov./terr. | Out                            | Net     | In          |
| (1)         | (2)                            | (3)     | (4)=(2)+(3) |
| N.L.        | 12,051                         | -2,263  | 9,788       |
| P.E.I.      | 2,170                          | 883     | 3,053       |
| N.S.        | 15,305                         | 600     | 15,905      |
| N.B.        | 11,602                         | 472     | 12,074      |
| Que.        | 34,998                         | -14,736 | 20,262      |
| Ont.        | 60,383                         | 17,869  | 78,252      |
| Man.        | 17,208                         | -1,163  | 16,045      |
| Sask.       | 22,962                         | -5,679  | 17,283      |
| Alta.       | 51,428                         | 10,633  | 62,061      |
| B.C.        | 54,902                         | -6,450  | 48,452      |
| Y.T.        | 2,119                          | -579    | 1,540       |
| N.W.T.      | 2,662                          | 412     | 3,074       |
| Canada      | 287,790                        | 0       | 287,790     |

Table D7 (concl.)

| 2000/01<br>Prov./terr.<br>(1) | Preliminary modified migration |            |                   |
|-------------------------------|--------------------------------|------------|-------------------|
|                               | Out<br>(2)                     | Net<br>(3) | In<br>(4)=(2)+(3) |
| N.L.                          | 12,038                         | -3,313     | 8,725             |
| P.E.I.                        | 2,395                          | 66         | 2,461             |
| N.S.                          | 16,294                         | -771       | 15,523            |
| N.B.                          | 11,736                         | -76        | 11,660            |
| Que.                          | 31,145                         | -11,023    | 20,122            |
| Ont.                          | 57,741                         | 16,726     | 74,467            |
| Man.                          | 17,570                         | -2,895     | 14,675            |
| Sask.                         | 24,625                         | -9,780     | 14,845            |
| Alta.                         | 45,611                         | 24,090     | 69,701            |
| B.C.                          | 53,339                         | -11,872    | 41,467            |
| Y.T.                          | 1,966                          | -792       | 1,174             |
| N.W.T.                        | 3,322                          | -361       | 2,961             |
| Canada                        | 277,782                        | 0          | 277,782           |

Note: PM out and PM net are from regression using three-year pooling data.

Table D8: Percentage difference for preliminary modified (PM) and preliminary (P), in-migration (in = out + net), Canada, provinces and territories, 1994/95 to 2000/01

| 1994/95<br>Prov./terr.<br>(1)          | In-migration |          |           | Difference  |            | % difference |          |
|----------------------------------------|--------------|----------|-----------|-------------|------------|--------------|----------|
|                                        | P<br>(2)     | F<br>(3) | PM<br>(4) | F-PM<br>(5) | F-P<br>(6) | PM<br>(7)    | P<br>(8) |
| N.L.                                   | 10,457       | 6,406    | 7,862     | -1,456      | -4,051     | -22.73       | -63.24   |
| P.E.I.                                 | 3,498        | 2,514    | 3,011     | -497        | -984       | -19.77       | -39.14   |
| N.S.                                   | 19,883       | 15,299   | 16,311    | -1,012      | -4,584     | -6.61        | -29.96   |
| N.B.                                   | 15,297       | 10,853   | 12,687    | -1,834      | -4,444     | -16.90       | -40.95   |
| Que.                                   | 27,758       | 23,056   | 21,595    | 1,461       | -4,702     | 6.34         | -20.39   |
| Ont.                                   | 90,211       | 66,902   | 75,804    | -8,902      | -23,309    | -13.31       | -34.84   |
| Man.                                   | 23,286       | 15,890   | 19,220    | -3,330      | -7,396     | -20.96       | -46.54   |
| Sask.                                  | 23,522       | 16,814   | 19,210    | -2,396      | -6,708     | -14.25       | -39.90   |
| Alta.                                  | 62,649       | 51,247   | 51,891    | -644        | -11,402    | -1.26        | -22.25   |
| B.C.                                   | 87,542       | 70,783   | 76,456    | -5,673      | -16,759    | -8.01        | -23.68   |
| Y.T.                                   | 2,383        | 2,067    | 2,000     | 67          | -316       | 3.24         | -15.29   |
| N.W.T.                                 | 4,141        | 3,137    | 3,433     | -296        | -1,004     | -9.44        | -32.01   |
| Canada                                 | 370,627      | 284,968  | 309,480   | -24,512     | -85,659    | -8.60        | -30.06   |
| Average absolute percentage difference |              |          |           |             |            | 11.90        | 34.02    |
| sd of absolute percentage difference   |              |          |           |             |            | 7.15         | 13.22    |

  

| 1995/96<br>Prov./terr.<br>(1)          | In-migration |          |           | Difference  |            | % difference |          |
|----------------------------------------|--------------|----------|-----------|-------------|------------|--------------|----------|
|                                        | P<br>(2)     | F<br>(3) | PM<br>(4) | F-PM<br>(5) | F-P<br>(6) | PM<br>(7)    | P<br>(8) |
| N.L.                                   | 10,665       | 7,005    | 7,858     | -853        | -3,660     | -12.18       | -52.25   |
| P.E.I.                                 | 3,482        | 2,882    | 2,860     | 22          | -600       | 0.76         | -20.82   |
| N.S.                                   | 20,301       | 16,263   | 16,149    | 114         | -4,038     | 0.70         | -24.83   |
| N.B.                                   | 14,607       | 11,770   | 11,656    | 114         | -2,837     | 0.97         | -24.10   |
| Que.                                   | 28,090       | 22,556   | 21,289    | 1,267       | -5,534     | 5.62         | -24.53   |
| Ont.                                   | 84,390       | 69,059   | 66,963    | 2,096       | -15,331    | 3.04         | -22.20   |
| Man.                                   | 20,811       | 15,075   | 16,463    | -1,388      | -5,736     | -9.21        | -38.05   |
| Sask.                                  | 23,476       | 17,411   | 18,700    | -1,289      | -6,065     | -7.40        | -34.83   |
| Alta.                                  | 66,931       | 57,037   | 54,004    | 3,033       | -9,894     | 5.32         | -17.35   |
| B.C.                                   | 81,141       | 66,959   | 66,921    | 38          | -14,182    | 0.06         | -21.18   |
| Y.T.                                   | 2,874        | 2,203    | 2,368     | -165        | -671       | -7.49        | -30.46   |
| N.W.T.                                 | 3,850        | 3,065    | 3,016     | 49          | -785       | 1.60         | -25.61   |
| Canada                                 | 360,618      | 291,285  | 288,247   | 3,038       | -69,333    | 1.04         | -23.80   |
| Average absolute percentage difference |              |          |           |             |            | 4.53         | 28.02    |
| sd of absolute percentage difference   |              |          |           |             |            | 3.95         | 9.68     |

  

| 1996/97<br>Prov./terr.<br>(1)          | In-migration |          |           | Difference  |            | % difference |          |
|----------------------------------------|--------------|----------|-----------|-------------|------------|--------------|----------|
|                                        | P<br>(2)     | F<br>(3) | PM<br>(4) | F-PM<br>(5) | F-P<br>(6) | PM<br>(7)    | P<br>(8) |
| N.L.                                   | 10,911       | 6,962    | 7,696     | -734        | -3,949     | -10.54       | -56.72   |
| P.E.I.                                 | 3,277        | 2,694    | 2,659     | 35          | -583       | 1.30         | -21.64   |
| N.S.                                   | 19,703       | 15,878   | 15,457    | 421         | -3,825     | 2.65         | -24.09   |
| N.B.                                   | 13,726       | 11,230   | 10,621    | 609         | -2,496     | 5.42         | -22.23   |
| Que.                                   | 27,709       | 20,437   | 20,065    | 372         | -7,272     | 1.82         | -35.58   |
| Ont.                                   | 81,884       | 69,978   | 63,479    | 6,499       | -11,906    | 9.29         | -17.01   |
| Man.                                   | 17,946       | 13,883   | 13,727    | 156         | -4,063     | 1.12         | -29.27   |
| Sask.                                  | 21,774       | 16,771   | 16,930    | -159        | -5,003     | -0.95        | -29.83   |
| Alta.                                  | 78,779       | 70,333   | 63,988    | 6,345       | -8,446     | 9.02         | -12.01   |
| B.C.                                   | 71,582       | 59,432   | 57,342    | 2,090       | -12,150    | 3.52         | -20.44   |
| Y.T.                                   | 2,332        | 1,905    | 1,913     | -8          | -427       | -0.42        | -22.41   |
| N.W.T.                                 | 3,526        | 2,844    | 2,792     | 52          | -682       | 1.83         | -23.98   |
| Canada                                 | 353,149      | 292,347  | 276,669   | 15,678      | -60,802    | 5.36         | -20.80   |
| Average absolute percentage difference |              |          |           |             |            | 3.99         | 26.27    |
| sd of absolute percentage difference   |              |          |           |             |            | 3.66         | 11.37    |

**Research on modifications to the method of preliminary estimates of interprovincial migration**

**Table D8 (cont.)**

| 1997/98                                | In-migration |         |         | Difference |         | % difference |        |
|----------------------------------------|--------------|---------|---------|------------|---------|--------------|--------|
| Prov./terr.                            | P            | F       | PM      | F-PM       | F-P     | PM           | P      |
| (1)                                    | (2)          | (3)     | (4)     | (5)        | (6)     | (7)          | (8)    |
| N.L.                                   | 9,817        | 7,392   | 6,892   | 500        | -2,425  | 6.76         | -32.81 |
| P.E.I.                                 | 2,828        | 2,570   | 2,255   | 315        | -258    | 12.26        | -10.04 |
| N.S.                                   | 18,015       | 16,304  | 14,107  | 2,197      | -1,711  | 13.48        | -10.49 |
| N.B.                                   | 14,203       | 10,904  | 11,221  | -317       | -3,299  | -2.91        | -30.25 |
| Que.                                   | 26,173       | 20,513  | 19,514  | 999        | -5,660  | 4.87         | -27.59 |
| Ont.                                   | 85,680       | 75,216  | 69,779  | 5,437      | -10,464 | 7.23         | -13.91 |
| Man.                                   | 17,690       | 14,906  | 13,813  | 1,093      | -2,784  | 7.33         | -18.68 |
| Sask.                                  | 21,204       | 18,697  | 16,837  | 1,860      | -2,507  | 9.95         | -13.41 |
| Alta.                                  | 97,229       | 86,307  | 82,879  | 3,428      | -10,922 | 3.97         | -12.65 |
| B.C.                                   | 61,372       | 51,524  | 49,149  | 2,375      | -9,848  | 4.61         | -19.11 |
| Y.T.                                   | 1,734        | 1,502   | 1,366   | 136        | -232    | 9.05         | -15.45 |
| N.W.T.                                 | 2,885        | 2,823   | 2,221   | 602        | -62     | 21.32        | -2.20  |
| Canada                                 | 358,830      | 308,658 | 290,033 | 18,625     | -50,172 | 6.03         | -16.25 |
| Average absolute percentage difference |              |         |         |            |         | 8.65         | 17.22  |
| sd of absolute percentage difference   |              |         |         |            |         | 5.15         | 9.04   |

  

| 1998/99                                | In-migration |         |         | Difference |         | % difference |        |
|----------------------------------------|--------------|---------|---------|------------|---------|--------------|--------|
| Prov./terr.                            | P            | F       | PM      | F-PM       | F-P     | PM           | P      |
| (1)                                    | (2)          | (3)     | (4)     | (5)        | (6)     | (7)          | (8)    |
| N.L.                                   | 10,988       | 7,995   | 8,616   | -621       | -2,993  | -7.77        | -37.44 |
| P.E.I.                                 | 2,982        | 2,579   | 2,518   | 61         | -403    | 2.37         | -15.63 |
| N.S.                                   | 17,035       | 15,529  | 14,310  | 1,219      | -1,506  | 7.85         | -9.70  |
| N.B.                                   | 12,706       | 10,470  | 10,554  | -84        | -2,236  | -0.80        | -21.36 |
| Que.                                   | 24,226       | 19,506  | 18,647  | 859        | -4,720  | 4.40         | -24.20 |
| Ont.                                   | 82,865       | 72,821  | 71,276  | 1,545      | -10,044 | 2.12         | -13.79 |
| Man.                                   | 18,430       | 13,985  | 15,310  | -1,325     | -4,445  | -9.47        | -31.78 |
| Sask.                                  | 22,533       | 15,200  | 18,620  | -3,420     | -7,333  | -22.50       | -48.24 |
| Alta.                                  | 85,770       | 70,932  | 75,209  | -4,777     | -14,838 | -6.03        | -20.92 |
| B.C.                                   | 50,866       | 43,300  | 40,407  | 2,893      | -7,566  | 6.68         | -17.47 |
| Y.T.                                   | 1,606        | 1,306   | 1,211   | 95         | -300    | 7.27         | -22.97 |
| N.W.T.                                 | 3,401        | 2,849   | 2,856   | -7         | -552    | -0.25        | -19.38 |
| Canada                                 | 333,408      | 276,472 | 279,534 | -3,062     | -56,936 | -1.11        | -20.59 |
| Average absolute percentage difference |              |         |         |            |         | 6.46         | 23.57  |
| sd of absolute percentage difference   |              |         |         |            |         | 5.88         | 10.82  |

  

| 1999/2000                              | In-migration |         |         | Difference |         | % difference |        |
|----------------------------------------|--------------|---------|---------|------------|---------|--------------|--------|
| Prov./terr.                            | P            | F       | PM      | F-PM       | F-P     | PM           | P      |
| (1)                                    | (2)          | (3)     | (4)     | (5)        | (6)     | (7)          | (8)    |
| N.L.                                   | 11,609       | 8,400   | 9,788   | -1,388     | -3,209  | -16.52       | -38.20 |
| P.E.I.                                 | 3,361        | 2,662   | 3,053   | -391       | -699    | -14.69       | -26.26 |
| N.S.                                   | 18,650       | 16,272  | 15,905  | 367        | -2,378  | 2.26         | -14.61 |
| N.B.                                   | 14,109       | 11,286  | 12,075  | -789       | -2,823  | -6.99        | -25.01 |
| Que.                                   | 25,033       | 20,989  | 20,262  | 727        | -4,044  | 3.46         | -19.27 |
| Ont.                                   | 91,347       | 78,903  | 78,252  | 651        | -12,444 | 0.83         | -15.77 |
| Man.                                   | 18,954       | 14,075  | 16,045  | -1,970     | -4,879  | -14.00       | -34.66 |
| Sask.                                  | 20,781       | 14,556  | 17,283  | -2,727     | -6,225  | -18.73       | -42.77 |
| Alta.                                  | 72,685       | 70,721  | 62,061  | 8,660      | -1,964  | 12.25        | -2.78  |
| B.C.                                   | 57,866       | 43,465  | 48,452  | -4,987     | -14,401 | -11.47       | -33.13 |
| Y.T.                                   | 1,679        | 1,267   | 1,540   | -273       | -412    | -21.55       | -32.52 |
| N.W.T.                                 | 3,422        | 2,818   | 3,074   | -256       | -604    | -9.08        | -21.43 |
| Canada                                 | 339,496      | 285,414 | 287,790 | -2,376     | -54,082 | -0.83        | -18.95 |
| Average absolute percentage difference |              |         |         |            |         | 10.99        | 25.53  |
| sd of absolute percentage difference   |              |         |         |            |         | 6.62         | 11.43  |

Table D8 (concl.)

| 2000/01<br>Prov./Terr.                    | In-migration |         |         | Difference |         | % difference |        |
|-------------------------------------------|--------------|---------|---------|------------|---------|--------------|--------|
|                                           | P            | F       | PM      | F-PM       | F-P     | PM           | P      |
| (1)                                       | (2)          | (3)     | (4)     | (5)        | (6)     | (7)          | (8)    |
| N.L.                                      | 10,611       | 7,499   | 8,725   | -1,226     | -3,112  | -16.35       | -41.50 |
| P.E.I.                                    | 2,887        | 2,567   | 2,462   | 105        | -320    | 4.09         | -12.47 |
| N.S.                                      | 18,332       | 15,313  | 15,523  | -210       | -3,019  | -1.37        | -19.72 |
| N.B.                                      | 13,716       | 10,539  | 11,660  | -1,121     | -3,177  | -10.64       | -30.15 |
| Que.                                      | 24,834       | 21,341  | 20,122  | 1,219      | -3,493  | 5.71         | -16.37 |
| Ont.                                      | 85,761       | 74,516  | 74,467  | 40         | -11,245 | 0.07         | -15.09 |
| Man.                                      | 17,562       | 12,623  | 14,675  | -2,052     | -4,939  | -16.26       | -39.13 |
| Sask.                                     | 18,497       | 12,985  | 14,845  | -1,860     | -5,512  | -14.32       | -42.45 |
| Alta.                                     | 79,371       | 64,129  | 69,701  | -5,572     | -15,242 | -8.69        | -23.77 |
| B.C.                                      | 50,019       | 43,338  | 41,467  | 1,871      | -6,681  | 4.32         | -15.42 |
| Y.T.                                      | 1,465        | 1,153   | 1,174   | -21        | -312    | -1.82        | -27.06 |
| N.W.T.                                    | 3,521        | 2,846   | 2,961   | -115       | -675    | -4.04        | -23.72 |
| Canada                                    | 326,576      | 268,849 | 277,782 | -8,933     | -57,727 | -3.32        | -21.47 |
| Average absolute<br>percentage difference |              |         |         |            |         | 7.31         | 25.57  |
| sd of absolute<br>percentage difference   |              |         |         |            |         | 5.83         | 10.68  |

Note: PM in-migration is the sum of PM out-migration and PM net-migration